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ABSTRACT

This guide describes development of the problem-based approach of GED as project. It is Volume 1 of a proposed four-volume series. Section 1 describes the concept of GED as project, thinking and problem solving, successful intelligence, and integration of content and skills. Section 2 covers GED as project implementation using learning projects and inquiry activities. It explains how the learning project focuses on a larger issue requiring multiple inquiry activities to achieve. Five phases of the inquiry process, a template to develop inquiry activities, are presented: identifying the problem; becoming familiar with the problem; planning, assigning, and performing tasks; sharing with others; and reflecting, extending, evaluating. Section 3, on teaching through facilitation, discusses facilitated learning as active learning, characteristics of effective facilitators, and facilitative style. Section 4 covers these assessment topics: a definition, methods, intake assessment, and disabilities. Section 5 lists tips to manage the GED as project classroom. Sections 6 and 7 provide sample inquiry activities for two learning projects: "The GED and You" and "The GED and You Revisited." Each inquiry activity follows the template described in Section 2. The inquiry activity instructions are in an instructor guide format; learner's instructions are in italics. The learners' version includes spaces for writing notes and answers. Appendixes include a list of 33 print, web, and video resources for use with GED 2002; sample individual action plans; and list of 11 references. (YLB)

GED as Project - Pathways to Passing the GED

Volume 1 - Introduction

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GED as Project - Pathways to Passing the GED

Volume 1 - Introduction

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Intro Poster	Adobe Acrobat

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GED as Project: Pathways to Passing the GED
 Developed by Virginia's Workforce Improvement Network (WIN), a
 partnership between James Madison University and the Virginia Literacy
Foundation and funded by the Virginia Department of Education, Office of
 Adult Education and Literacy.

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Foreword

GED as Project: Pathways to Passing the GED has been developed through the hard work, dedication and vision of many adult education professionals. Funded by the Virginia Department of Education, Office of Adult Education and Literacy, the Project was conducted by Virginia's Workforce Improvement Network (WIN), a partnership between James Madison University and the Virginia Literacy Foundation.

The first phase of this project included the development of the problem-based approach as presented in Volume 1 of *GED as Project* and the Math Learning Projects found in Volume 2. The Language Arts – Reading and Writing Learning Projects will be published in mid-2003 with Science and Social Studies following in 2004. Go to the *GED as Project* web site at <http://www.jmu.edu/gedproject> to see the most current information about this project and to view video clips that illustrate how to use the *GED as Project* approach in the classroom. Information about ordering *GED as Project* videos on CD-ROM is also on the web site.

The project team members are as follows:

- Dr. Diane Foucar-Szocki – Research /Principal Investigator
- Barbara E. Gibson – Project Management
- Edmund Vitale, Jr. – Curriculum
- Susan Holt – Instruction
- Bonnie Burt – Technology
- Candace Miles – Program Assistant

We are deeply appreciative of the consultants who guided and supported this phase of our work. Their commitment to the vision of *GED as Project* from the very beginning inspired the team to higher levels of performance than we imagined possible. Special words of thanks must go to Myrna Manly without whose knowledge, experience and patience the Math section of *GED as Project* would not have been possible. Consultants for this project were:

- Myrna Manly – Consultant, author and former math instructor
- Dr. Thomas Valentine – Author and Professor in Adult Education and Research, University of Georgia
- Dr. Kenn Barron – Assistant Professor of Psychology, James Madison University
- Scott Fields – McCabe/Pillow Graphic Design
- Jennifer Norvell – Norvell Communications

Field testing of *GED as Project* was conducted with three adult education programs across Virginia. The instructors and administrators who participated in the field test not only used the materials we provided, but also made suggestions for additional materials and approaches. They provided important

insights and ideas to the project team. The adult learners who agreed to participate in the field test also contributed significantly to *GED as Project* by allowing us to collect samples of their work, sharing their thoughts and ideas while in the classroom, and giving valuable input during site visits. The field test sites and participating adult educators are listed below:

- New River Community College, Adult Education — Jenny Leadbetter-Bolte, Coordinator and Instructors: Sara Smith, Charlotte Leslie, Rebecca Yearout
- Prince William County Public Schools, Adult Education — Susan Garlock, Coordinator and Instructors: Eileen Rakshys, Vickey Logan, Debbie Caselli
- Regional Adult Education, Planning District 9 — Phyllis Metzger, Coordinator and Instructors: Margaret Buraker, Clysta Walters, Eileen Moser

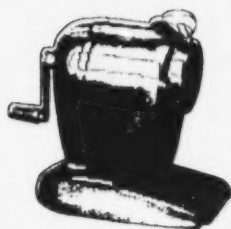
The following deserve special recognition for their contributions to specific aspects of the project:

- Robert MacGillivray, Adult Secondary/GED Administrator, Office of Adult Education and Literacy, Virginia Department of Education, who gave guidance and support to the project team throughout the development process
- Gwen Smith, Specialist for Literacy Projects, Office of Adult Education and Literacy, Virginia Department of Education, who wrote the scripts for the videotapes accompanying *GED as Project* and starred as Mrs. Harriman, the instructor
- Marcia Phillips, independent consultant and WIN Certified Program Developer, who edited *GED as Project* and wrote the pages for the project's web site
- Lydia Powers, graphic designer, Madison Media Labs, a program of James Madison University, who created the logo for the print and web versions of *GED as Project*
- John Hodges, Production Manager, James Madison University, School of Media Arts and Design, who served as videographer for the project

Finally, we wish to recognize Dr. Yvonne Thayer, Director of the Office of Adult Education and Literacy, Virginia Department of Education, for her commitment to the advancement of adult education practice and her dedication to the adults for whom the GED is a pathway to success as workers, parents and citizens. Her desire for an articulated approach to teaching the new GED ultimately led to the development of *GED as Project*. We thank her for her leadership and her vision.



Preface



The GED high school equivalency exam has been available to adults for nearly 60 years. Yet, according to the 2000 Census, an estimated 700,000 adults in Virginia have not completed high school nor taken the GED.

They are at a disadvantage in our fast-paced, information-driven age, where

formal learning and schooling are more important than ever. Helping those adults achieve success on the GED remains, as it has been for many years, a central tenet of adult education in Virginia and across America. The implementation of GED 2002 presents a unique opportunity for adult educators to help adults achieve their goal of attaining a GED. Now seems an appropriate time to examine the current needs, practices and state of the art for preparing adults to pass the GED. We must take a fresh look not only at the subject matter, but also at the way it is taught.

We have examined the GED, its content, its structure, both old and new, and the skills embedded in the test. In addition, we have reviewed many current teaching methodologies. Our review has led us to propose *GED as Project: Pathways to Passing the GED* as a means of achieving effective results with adults pursuing their GED. As the name implies, the overarching principle of *GED as Project* is the value of project-based learning in adult education. We propose that the GED test itself can be a powerful project for those adults who choose to pursue it.

In this guide, we describe our concept of the *GED as Project*, articulating the role of the instructor, the role of the individual, both as test-taker and as learner, and the role of instructional materials in the classroom. We outline for instructors the necessary practices for using this approach. Central to the *GED as Project* are the Inquiry Activities, designed to stimulate interest and discovery by the learner, facilitated by the instructor. Grouped together by theme and/or skills to be explored, Inquiry Activities form the basis of Learning Projects. In Volume 1, we define Learning Project and Inquiry Activity, provide a template or guide to use in developing Inquiry Activities, and provide sample Inquiry Activities for two Learning Projects: "The GED and You" and "The GED and You Revisited." In addition, we provide an annotated list of resources for use with GED 2002. Volume 2 contains Math Learning Projects. In subsequent years, we will provide Learning Projects for the other four subjects covered by the GED.

Through the learning approach advocated by *GED as Project*, the adult who seeks help in achieving the GED is regarded in two distinct ways: as test-taker and learner. Using *GED as Project* allows instructors to facilitate the adult in the skill of taking tests, as well as in the skill of learning. One helps the adult student to pass a credentialing test; the other equips him or her both for life-long learning and for competing in today's world — a win/win for all adults pursuing their GED.



Section 1

Introduction: GED as Project

What we know about teaching and learning expands daily. While the process remains somewhat mysterious, we do know that, for adults and children alike, sitting in rows, listening to an instructor and filling in worksheets is not the most effective way to learn content or develop the higher order thinking skills of analysis, synthesis and evaluation.

Many GED learners entering the classroom anticipate learning their math, reading, writing, science and social studies in just that traditional style. However, *GED as Project* offers a different vision, embracing what we know about enhancing higher order thinking skills, using the content and material of the GED.

What Is GED as Project?

In its simplest form, project-based learning involves a group of learners taking on an issue close to their hearts, developing a response, and presenting the results to a wider audience. (Heidi Spruck-Wrigley, 1998)

GED as Project gives instructors an approach to learning in the context of the GED. It is based on sound educational and cognitive research that are valuable to adult basic educators and the GED 2002 learner. To implement this approach, we use Learning Projects to help the student achieve success on the GED. Each Learning Project is broken down into man-

ageable Inquiry Activities, helping the learner meet the objectives of each Learning Project and, ultimately, to meet the objective of passing the GED.

Project-based learning is a learner-centered, problem solving, inquiry- and skill-based experience that promotes analytical, creative and practical thinking, integrating content and skills. It allows for exploratory and discovery learning, where the learner constructs meaning for him/herself. For adults pursuing the GED, the often lengthy and complex tasks make a worthy project: GED preparation and skill acquisition. The projects are centered on the content of a GED practice test and the test-taking and thinking skills needed to succeed at passing the GED. Project-based learning recognizes the need for establishing background knowledge, linking learning to experience, achieving personal growth, and applying knowledge and skills to many different areas of our lives.

For the adult seeking the GED, many different aspects of achievement exist, often providing means to other ends, in addition to its being an end in itself.

GED as Project takes full advantage of the learner's desire to achieve the goal of passing the GED exam, placing the test and its content at the center of the project to be undertaken. Passing the GED is the context within which cognitive and problem-solving skills are developed.

Implicit in any project undertaken by any group are skills for structuring the interaction and pursuing the goals. A leader or a facilitator will almost always be needed. Initially, the instructor will design the Learning Projects and Inquiry Activities that make up *GED as Project*. As learners gain increasing familiarity with the approach, design and facilitation of the Learning Projects, learners and learning groups will gradually take on more responsibility for developing Learning Projects and Inquiry Activities.

All of us have pursued projects in our lives, both large and small. Like many projects, obtaining a GED is a more complex task than it may initially appear. Often, when adults enter a GED preparation program, they are not fully aware of all that is required to pass the test. Learners don't often know how the test is administered, how much time the test takes, what subject areas are addressed, how the subjects are tested, and what skills they will need to be successful. By pursuing *GED as Project*, learners not only come to understand the scope of the GED exam, they begin to develop the skills necessary to achieve academic success, building on and relating their efforts to the other successful projects they have pursued in their lives.



Thinking And Problem Solving

The revised content and approach of the GED 2002 expands the testing of higher order thinking skills, according to the GED Testing Service and other sources.¹ For instance, a marked increase in the use of graphics and visuals in the Math, Social Studies and Science tests requires both evaluation and synthesis of material. Throughout, more workplace-oriented documents and questions address life skills and problem solving. Further, questions in Language Arts-Reading favor analysis rather than literal comprehension. Science has a significant increase in application questions. Math will also introduce the use of calculators, standard grids and coordinate planes, all of which will require basic problem solving skills.

Therefore, preparation for the GED 2002 must center on not just knowing content facts, but on the understanding, application and analysis of the content material. Instruction must extend beyond recall of restricted content to develop broader, more transferable performances by learners in the test-taking situation, as well as in their everyday lives. The instructional approach offered in *GED as Project* attempts to facilitate that. The inquiry process focuses on:

- Asking questions
- Planning, assigning and performing the investigations
- Seeking to understand
- Sharing with others
- Reflecting and evaluating.

Each part of the process is essential to successful test taking, but, more importantly, all are necessary for successful living.

Successful Intelligence

What makes a person successful? How do successful people navigate life? Sternberg's theory of intelligence, or the Triarchic Model, posits three types of intelligence: analytic, creative and practical (Sternberg & Grigorenko, 2000), as follows:

- Analytical ability is used when a person analyzes, evaluates, compares and contrasts
- Creative ability is used when a person creates, invents or discovers
- Practical ability is used when a person puts into practice, applies, or uses what he or she has learned (p. 11).

Traditional schooling has long been strong in recognizing, developing and assessing analytic thinking; however, schooling has not routinely prized, recognized or developed creative or practical thinking. Yet all three are needed for success in life. Sternberg's research has shown that teaching to develop all three types of thinking can enhance performance on standardized and high stakes tests (Sternberg, 2000).

Adults who have not graduated from high school may not be academically inclined, but they have often become strong practical or creative thinkers. By adopting a Successful Intelligence approach to instruction, we will be encouraging learners to use their creative and practical thinking abilities, as well as developing the analytic approach in their efforts to pass the GED 2002.

Integration Of Content And Skills

Reading comprehension has long been presumed to be the basis upon which accomplishment in all other subject areas rests. Recent research in cognitive science suggests that to be most effective, skills need to be taught in the context in which they will be used, and that reading skills are subject-specific (Cromley, 1998). Reading for leisure is different from reading for information. Reading as a scientist, reading as a mathematician, or as a social scientist all utilize different skills. Mathematical reasoning in context or writing for a specific purpose will also utilize different skills. Consequently, we must better equip ourselves to understand and integrate the skills of reading, writing and mathematical reasoning within the content areas. We must not rely exclusively on decontextualized reading tests measuring reading levels, math tests measuring computational abilities, or simple writing samples to be reflective of a learner's skills, knowledge or ability. Performance on these measures does not necessarily transfer to other subject areas or contexts. To be effective, we must understand and teach subject- and context-appropriate skills in order to help the learner pass the GED.

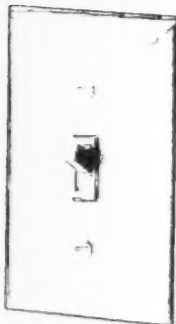
GED as Project will introduce instructional approaches, strategies and activities that seek to integrate, not separate, the higher order thinking skills that transcend the five subject areas of the GED 2002, using inquiry-based, problem-centered projects derived directly from Official GED Practice Test items.

¹ GED Testing Service Video Conferences: "GED 2002 - Everything You Need to Know" 4/27/00 and "Making the Transition" 11/30/00, the GED Testing Service web site: www.gedtest.org; and Steck Vaughn's "GED Sampler" and "GED Instructors' Resource Guide," 2002.



Section 2:

Learning Projects and Inquiry Activities



GED as Project is designed to give instructors an approach to learning in the context of the GED, based on sound educational and cognitive research valuable to adult basic education and the GED 2002 learner. To implement this approach, we use Learning Projects to help the student achieve success on the GED. Each Learning Project is broken down into manageable Inquiry

Activities to help the learner meet the

objective of each Learning Project and, ultimately, to meet the objective of passing the GED.

Project-based learning recognizes the need for establishing background knowledge, linking learning to personal growth, and applying knowledge and skills to many different areas of our lives. Traditional project-based approaches often use events or issues shared by the learners as the stimulus for the project. These projects are often large and complex, involving multiple tasks that may take weeks to accomplish. *GED as Project* suggests that you use GED practice test items as the stimulus. In so doing, you are taking the best of project-based, inquiry-oriented instruction and focusing it toward the most pressing desire for the learning group — passing the GED.

The Learning Project will focus on a larger issue or area that requires multiple Inquiry Activities to achieve. Learning Projects used in preparing for the GED will need to be short, targeted and focused.

For instance, the Learning Project entitled "The GED and You" on page 14 culminates in a learner-derived Action Plan to pass the GED. Arriving at the Action Plan requires the learner to investigate several things: his/her current circumstance and understanding of the GED, the details of the GED examination forms and process, the necessary studying and test-taking skills, and his/her own strengths and weaknesses in the context of the GED. Doing all of this in one Inquiry Activity would be difficult for most, so the project is made up of a series of Inquiry Activities, each focused on a single topic that makes up a part of the Learning Project.

Structuring Inquiry Activities

No rules determine how a project is realized, although all projects seem to progress through some common phases: identification of a problem or issue, preliminary investigations, planning and assigning tasks, researching the topic, implementing the project, drafting and developing a final product, dissemination, and evaluating what worked. (Heidi Spruck-Wrigley, 1998)

The first goal for learners engaged in this approach to instruction is to shift their view of taking the test from a distant outcome to a multi-faceted project. This is achieved in a variety of ways, but most directly by the instructor creating an environment for inquiry and group learning around the shared interest of the group: passing the GED. As previously indicated, *GED as Project* introduces five phases for each Inquiry Activity, whether that activity is a ten-minute or a two-week inquiry. How these phases are accomplished in each subject area will vary slightly, but once the approach is established, the instructor and the learners will begin to see how the process of *GED as Project* works, and they can begin to modify it to meet their own needs. The key is to maintain a point of view that has both the teacher and the student asking and answering questions.

The five phases of the Inquiry Process are shown in Figure A.

Figure A

Template For The Inquiry Process

1. Identifying The Problem
2. Becoming Familiar With The Problem
3. Planning, Assigning And Performing Tasks
 - Doing The Work
 - Reaching A Conclusion
4. Sharing With Others
5. Reflecting, Extending, Evaluating

(Note: This template will be adapted to the specific needs of the five subject areas.)



The Inquiry Process

1. Identifying The Problem

The instructor will want to initiate the inquiry by encouraging learners to explore what is being asked in the Inquiry Activity: What is the problem? The key is to inquire, to ask questions, to become comfortable with seeking as an activity for learning. For *GED as Project*, the instructor, not the group, initially identifies the focus and sequence of Inquiry Activities within a subject area to form a Learning Project. "GED Math and You" in Volume II is an example of a series of Inquiry Activities that make up a Learning Project. Most of the Inquiry Activities within the five subject areas will use Official GED Practice Test items as stimuli for the activities.



2. Becoming Familiar With The Problem

The familiarization step goes into more depth about the problem proposed by the test item itself. Research, analysis, exploring the required reading, or restating the problem are some effective ways for learners to begin to understand what is being asked and to share that understanding. Learners may also draw pictures or diagrams, use manipulatives, or even act out their understanding of the problem. Familiarization helps learners develop the context of the problem and establish a frame of reference. When familiarizing themselves with a problem or issue, some groups may work on one level while other groups work at another, or multi-level groups may pursue a problem together.

Familiarization may also be an individual activity. The instructor, the learner, or learner group may decide how to become familiar with a problem. In time, learning groups may become more involved in decisions about how to become familiar with the problem.

3. Planning, Assigning, And Performing Tasks *Planning*

Once the individuals, groups or class complete steps 1 and 2 of the Inquiry Activity, the class will be divided into groups, if that has not already taken

place. The learners are given Steps 3 and 4 of the Inquiry Activity and will plan who will do which tasks and how they will be accomplished. These tasks will include how the project is disseminated to others.

Assigning

Assigning the tasks in the Inquiry Activity to the group members is governed again by the group's knowledge of the content, one another and the process. Generally, assigning tasks is a group function, monitored by the instructor.

Performing

After the planning and assigning is complete, the group members start performing, actually doing the work.

The learners perform their group-assigned tasks by answering the instructor or group directed questions. These tasks might be broken up in the various subject matter templates into more than one step. In math, for instance, estimating and developing two ways to solve the problem are two steps that are embedded in this task. Research (using materials made available in the classroom or elsewhere) can be a focus of this portion of the task.

At this point, the students draw conclusions about the problem they have worked. To integrate writing throughout the project, we suggest that the instructor have the students write their results individually or as a small group. In this way, the instructor introduces writing not as an academic subject to be learned in isolation, but as a tool in developing a final product. In math there may be two steps for reaching a conclusion: compare your answer to the estimate and match the problem to your experience. Other subject areas might have different steps for reaching conclusions.



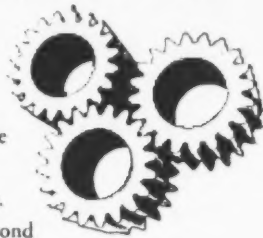
4. Sharing With Others

This is an activity that every GED content area will have. Sharing reinforces the learners' making meaning for themselves by communicating their understanding of what they have accomplished. Having groups share their activities puts them in the role of teaching others.



Learners will gain practical skills in using written, oral, or visual methods that can improve their test taking abilities. Organizing ideas and communicating them to others can be powerful ways to learn.

The group should discuss ways to communicate the conclusions reached in Inquiry Activities. A variety of traditional and non-traditional methods of sharing with others should be encouraged. How the work gets assigned within the group is a function of the group and not the instructor. Sharing with others goes beyond the sharing and exchange that went on in the group to plan, assign and do the work.



5. Reflecting, Extending And Evaluating

Reflecting gives the learners the chance to think about their experience and to learn both from the process and from the material being discussed. Extending gives the learners a chance to be both creative and practical. This provides further opportunity for them to integrate the material with other learning, to transfer what they learned to practical, everyday situations, and to be creative in that transfer. Through evaluation, the learner begins to learn how to learn, to determine which approaches work best for him/her in what situations, and to begin to build a collection of learning strategies to call upon in a variety of circumstances.

Reflecting, extending and evaluating what was learned and what worked can be very broad and can include any of the following questions for the learner.

Reflecting: Think about what you learned

- What did you learn that was new to you while working on this Inquiry Activity? (an analytical question)
- How has this Learning Project helped you focus on passing the GED? (an analytical question)

Extending: Extend what you learned to new situations.

- What kind of connections do you see among the concepts explored so far in this subject? (an analytical question)
- What did you learn in this Inquiry Activity that was similar to other Activities you have done? (an analytical question)
- Can you invent a test question of your own? (a creative question)
- Create a situation where you are in charge. How would this subject help there? (a creative question)
- How might you use what you learned in your home life now? (a practical question)
- How might you use what you learned in your work life now? (a practical question)

Evaluating: Assess what you learned and how you learned it.

The evaluation process is similar to the reflection process but tends to be more personal to each learner. These questions tend to be analytical, following Sternberg's Successful Intelligence model.

- What strengths of mine were apparent during the Inquiry Activity?
- What weaknesses were exposed, and what can I do to correct or compensate for them?
- How can I correct a perceived weakness?
- Do I need to commit to attending class regularly, schedule more time to complete homework, and/or complete my homework?

As this in-depth review shows, the inquiry process is dynamic and can be applied to different situations in multiple ways.



Section 3:

Teaching Through Facilitation

Learning New Ways, Unlearning The Old

As adult education practitioners, we generally agree on some basic ground rules in adult learning, based on the work of Malcolm Knowles among others, which form the basis of our understanding of the adult learner. For example:

- Adults are motivated to learn when they can identify that they have a need to learn and can see the subject's relevance to their lives;
- Adults learn best when learning is active rather than passive and involves experiences, more than lecture;
- Tapping into prior knowledge is essential to learning, as much of what adults retain in long-term memory builds on what they already know.

While we increasingly understand how adults learn, how



we teach to achieve the best results is more problematic. Research indicates that we teach in the ways that we have been taught. Few of us, however, were taught in ways now suggested by research to promote effective learning in adulthood. Thus when we teach, we need to develop our professional judgment and our ability to ask questions, build active learning environments and engage our learners in inquiry, styles we rarely, if ever, experienced in school. This means using workbooks sparingly and resisting pre-teaching and telling learners the answer without first asking them a few questions to understand their thinking processes better. This guide suggests that adult educators learn how to facilitate learning instead.

Facilitated learning is active learning. It engages the student in the project at hand. It encourages the student to think about the thinking that he/she is using to solve a problem. It centers on the student's discovering an answer for himself/herself, often with the help of a fellow student or a small group. The facilitated classroom creates opportunities for critical thinking and evaluation, central to passing the GED 2002.

Jennifer Cromley, in her book *Learning to Think, Learning to Learn*, (1998) defines active learning as "where students figure things out for themselves and participate in discussion, activities and projects" (p. 147).

Just as the GED 2002 borrows materials from the workplace to be more relevant to our learners' lives, GED instructors can borrow from the facilitation skills used in the workplace to teach the GED. *The Practical Guide to Facilitation*, by Farrell and Weaver, (2000) states that "facilitation is the most important role to emerge in the modern workplace" (p. 21). "...[T]he workplace is changing as never before, and effective facilitators are able to help individuals...adapt and thrive in the face of these changes." This is a real need in our learners' lives today.

If we are to be active learning facilitators, and our goal is to help students pass the GED test, how do we undergo the transformation from teacher to facilitator? Reflection is a good place to start.

Reflecting On Your Values As A Facilitator

We can learn much from how good facilitators operate and how they help groups function. As a means of reflecting on facilitation and understanding where your strengths and weaknesses lie as a facilitator, Figure B, developed by Dr. Nancy Berger of Training for Performance, Inc., provides a list



of characteristics of successful facilitators. Look through this list and identify where you are most comfortable as an instructor. Which skills pose a challenge for you? How will you strengthen these areas?

Figure B

What are some skills/characteristics of effective facilitators?

- Professional image and outlook
- Sensitivity for others
- Sense of humor
- Ability to establish and maintain enthusiasm
- Ability to show empathy
- Patience
- Ability to make decisions
- Ability to display warmth and establish rapport with participants
- Skill in asking questions
- Ability to interpret verbal and nonverbal communication
- Understanding of the nuances of small group process
- Listening skills and memory
- Ability to lead the group to consensus
- Ability to motivate and encourage the participants

Facilitator's job — when facilitating you should:

- Use active listening skills
- Interpret and use non-verbal communication
- Show patience
- Use/allow silence
- Repress personal biases
- Set and maintain a steady pace
- Lead the discussion
- Maintain group participation
- Use questions to probe
- Summarize statements
- Use reinforcement
- Help participants state tasks correctly
- Lead the group to consensus
- Make decisions
- Deal with difficult participants

Dr. Nancy Berger
Training for Performance, 1999

Our best and most important tool for this job, beyond our resources and experience, is our value system in the context of facilitation. What do we prioritize in our classrooms? What do we allow and encourage? How must we stretch ourselves to give the process to the learners rather than retaining control of every aspect ourselves?

Your personal values, what you consider to be important, have a major impact on how you might facilitate. In Your Values Inventory (Figure C) on page 8, we reflect on and clarify the values that you bring to your facilitation role. Explore your perspective, looking for those values that may make fulfilling the role of facilitator in the classroom more difficult. Ask yourself if you are willing to adjust these values and begin to imagine how you might begin to do so.

The goal of this exercise is to recognize and balance your preferences for the benefit of the learning group. This awareness can affect your facilitation style and, ultimately, your success in teaching the GED 2002, using the *GED as Project* approach.

Once you have taken the time to reflect on your own aptitude and attitude toward the qualities and values of a facilitator as opposed to those of a teacher, consider the following tips for developing your facilitative style.

The Facilitative Style

The professional judgment of the instructor makes all the difference in a classroom. Professional competence and professional judgment determine how a classroom operates. Developing a learning environment where learners are central requires that the instructor exercise effective professional judgment and commit to continuing professional development. Deciding to instruct in a more facilitative manner will lead to greater learner achievement.

Small Group Instruction

Over time, facilitators become experts in handling groups. Pairs, triads, small groups and large groups all become fertile ground for ensuring that the learner is central through facilitated discussion in the quest for deeper understanding. A facilitator needs to learn to assure the students from the beginning that the classroom environment is non-threatening and safe. Students may need to be invited and encouraged to take the risk of speaking up. The way you arrange your classroom, such as seating students in a circle or at tables instead of the standard rows, can also increase the effectiveness of group instruction.



You will want to develop diplomatic methods of controlling the non-stop talker, as well as asking the right questions that bring out the reluctant speaker. For a simple, to-the-point tip sheet on how to handle group instruction, see Appendix 1, created by Dr. Tom Valentine, Associate Professor, University of Georgia.

On Asking Questions

For some of us, developing skill in asking, rather than answering, questions may need attention. This involves understanding the small group process so that the group generates answers to the open-ended questions you ask. It involves leading a group to consensus, being an active listener, and using and allowing silence for think time, all of which may not be common in our classrooms.

Questions are best when they encourage learners to think and answer with more than yes or no. Instead of asking "did you learn...", ask "what did you learn?", "how did you learn?", or "why did you..." The W and H questions (who, what when, where, why and how) are a great tool for assuring that our questions ask for information from our learners. Learners want to answer questions correctly. If a question asks, "What

is needed to solve the problem?" they might hesitate in answering because they *might* get the answer wrong. However, if you ask what might be needed, no answer can be wrong, and learners will participate more freely. In addition, ask "In what ways would you/could you..." emphasizing the plural, so that more than one thought can be shared by more than one learner. In conclusion, consider questions that:

- Ask for more than yes or no answers using "who, what, where, when, why or how"
- Use "might" in your questions
- Use "in what ways?" to encourage many responses

Slow Down To Speed Up

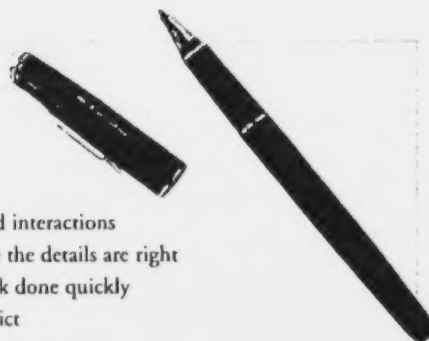
Don't be surprised if you only cover one or two Inquiry Activities per class period. "Teaching for understanding takes longer than teaching by rote." In fact, "Experts... tend to have very well-connected knowledge (not just more knowledge)" (Cromley, 1998, page 14). Slowing down instruction speeds up good learning and lessens the chance of having to present the same material again. After learners have slowly gone through this process, they will start to follow it automatically, and the content learning increases. It is important that the

Figure C

Your Values Inventory

Check one choice from each pair below. Either choice can be helpful. Just be aware that your choices affect how you facilitate.

- | | | |
|--|----|--|
| ☐ Completing tasks | OR | ☐ Having good interactions |
| ☐ Working in broad strokes | OR | ☐ Making sure the details are right |
| ☐ Getting everyone to participate | OR | ☐ Getting work done quickly |
| ☐ Avoiding conflict | OR | ☐ Facing conflict |
| ☐ Working from a plan | OR | ☐ Being spontaneous |
| ☐ Responding to events | OR | ☐ Managing what occurs |
| ☐ Letting people be quiet | OR | ☐ Insisting people speak |
| ☐ Letting people be loud | OR | ☐ Maintaining quieter atmosphere |
| ☐ Tolerating disruptions | OR | ☐ Avoiding disruptions |
| ☐ Focusing almost exclusively on work | OR | ☐ Focusing almost exclusively on people |
| ☐ Getting to solutions quickly | OR | ☐ Learning more about the problem |
| ☐ Following the group's rules | OR | ☐ Bending rules wherever necessary |
| ☐ Ignoring disrespectful behavior | OR | ☐ Confronting disrespectful behavior |
| ☐ Working on consensus | OR | ☐ Agreeing to disagree |



Used with permission The Practical Guide to Facilitation (1999) HRD Press



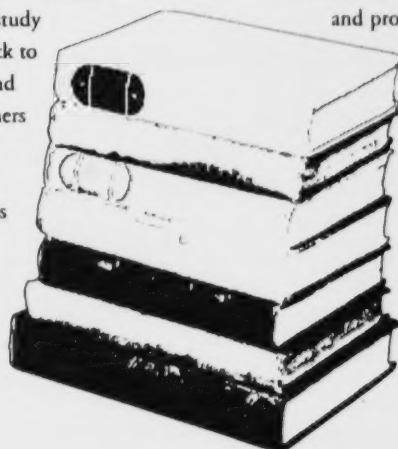
learners go through the process. When you introduce the inquiry process, it is likely that learners will want to focus only on getting the right answer and not pursue all the steps. This is natural, because our idea of learning stresses getting the right answer. If a learner arrives at the right answer quickly and consistently, using a variety of stimuli, that person may be ready to sit for the GED exam. However, if getting the right answer is challenging, then instructors should maintain use of the inquiry process. Getting the right answers without following the complete inquiry process is not necessarily solving the problem.

Facilitating 'The Spiral Curriculum'

While many of us are familiar with Bruner's spiral curriculum (Bruner, 1960), few curricula are designed around it. According to Wiggins & McTighe in *Understanding by Design* (1998), most curricula are still developed as scope-and-sequence, parceling out topics in a linear way.

Wiggins & McTighe cite the standard arguments: "Students need to learn all the basics before they perform" or "Inexperienced students are not ready to do complex tasks." Because of these firmly-held ideas, we front load our topics to the point that the students are often bored or frustrated by the slow and tedious linear march and have given up study before getting to the more interesting questions.

Using *GED as Project* provides the opportunity to introduce interesting, multi-faceted problems appropriate to the class early in the learning process. The inquiry process facilitates the learners' thinking process so that they can, with guidance, take apart the problem, discover the pieces of information they will need to approach it, and develop the skills from within the problem itself. As their study continues, instruction will spiral back to build up fundamental knowledge and reinforce new learning. As the learners work through more problems, the relationships of skills necessary for finding solutions to several problems will become evident to them.



This is not to say that there is no order to the learning. This guide's Learning Projects will provide some sequence, organizing the general topics into a manageable, overarching flow, but generally the knowledge and skills gained in the Inquiry Activities themselves will be dictated by problem requirements and not by an instructional scope-and-sequence design.

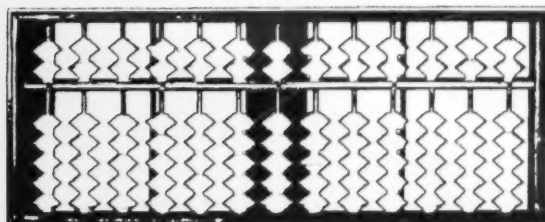
Trust The Process

"The GED and You" and "GED Math and You" (or other subjects) sections help to prepare the students for the process they will experience while studying for the GED 2002. But once we begin delving into the content areas, it will be tempting to revert to old habits and pre-teach by modeling new concepts and ideas, rather than allowing the students to try it themselves. We will need to challenge ourselves to trust the process of facilitation and the inquiry process template which call on us to allow for discovery and exploration first.

Is There A Place For Direct Instruction?

Direct instruction does have its place providing crucial information and stability to a class, particularly when students may be looking for answers and getting too frustrated to find them. It can be necessary and helpful after the students have made the attempt themselves, sorting out the pieces, evaluating and calling on all prior knowledge and each other to tackle the problem at hand. Sometimes when the answers are so obscure, or the direction the learners are taking brings them to a point too confusing, it is time for the facilitator to intervene. This guide calls these interventions Burst Lectures. Burst Lectures are done on the spot, when an assessment done Just-In-Time reveals that more information is necessary to keep the thinking and problem solving process moving forward. (See page 10 for a discussion of Just-In-Time assessment.)

Good facilitation, built on a solid process and effective professional judgment, creates synergy within the class. This is when "the whole is greater than the sum of its parts" (Farrell & Weaver, 2000.) When allowed to develop, it will lead to learning, improved thinking skills and test-taking success.



Section 4:

Assessment Within GED as Project

A Definition of Assessment

For the purposes of this guide, we adopt Wiggins & McTighe's definition of assessment, from their book *Understanding by Design* (1998):

By assessment, we mean the act of determining the extent to which the curricular goals are being and have been achieved. Assessment is an umbrella term we use to mean the deliberate use of many methods to gather evidence to indicate that students are meeting standards. (Page 4)

And what is the overall curricular goal but the passing of the GED? The *GED as Project* approach fits Wiggins & McTighe's concept of backward design. This means designing instruction with the end-goal in mind from the beginning, and then determining acceptable evidence that the student is learning and understanding. The final stage is to plan learning experiences and instruction.

This design process requires instructors to think like assessors, not just as activity designers. Instructors can in this way assess learning and check for understanding as the learners progress. Wiggins & McTighe's definition of understanding is multi-faceted, and includes such higher order thinking skills as being able to explain, interpret, apply, have perspective on an issue, empathize, and have self-knowledge. These skills all play an important part in passing the GED 2002. This is an on-going assessment, using both formal and informal methods.

Assessment Methods In The Guide

GED as Project provides special Learning Projects that act as pre- and on-going assessments fitting the definitions and design approaches previously discussed. The first two are called "The GED and You" and the "The GED and You Revisited." Both encourage discovery and independence in the learner and check progress in a style consistent with content-based Learning Projects. Because the "The GED and You Revisited" checks progress in what the learner believes he/she has accomplished and gives an opportunity to update the Action Plan for learning, it is important to weave this learning project into the course of study several times. Each subject area has its own introductory Learning Project. For example, "GED Math and You" requires the students to take the Math Practice Test and then asks them to evaluate how they feel about math, determine what they know and do not know about math, and develop their plan for study. This process adds a depth of assessment that standardized tests cannot provide. All of these Learning Projects are written to reinforce the inquiry learning style, while providing progress checks for both you and your learners.

Another tool this guide provides is the individual Action Plan that learners develop at the end of "The GED and You" to plan their learning, for both their own as well as the instructor's, information. It is simple and direct, and can be revised and revisited as necessary to fit the instructor's and learners' needs.

The guide also suggests that learners collect a GED learning portfolio as they proceed through the content area Inquiry Activities. These provide a track record for both learner and instructor, as well as a reference for practice and further study.

Finally, we encourage instructors to use any other means of observational or written assessments that fit their class needs, as well as their personal instructional styles. Often, this takes the form of what we call Just-in-Time (or JIT) assessments. These are largely observational quick checks that occur naturally in the instructional process. Each instructor has his/her own style of doing this, from peering over shoulders during individual work time, to checking learning and understanding while observing group activities or engaging in individual progress checks. A JIT assessment leads to quick, helpful interventions such as Burst Lectures, one-on-one assistance, or a quick digression to lay some foundation or



straighten out a misunderstanding. These methods are intended to get learners on their way to inquiry learning again, either individually or as a group.

Intake Assessment

For the purposes of this guide, we will assume that the learners have been tested with a standardized test at intake before they begin study. In Virginia, this is usually a formal assessment, such as TABE, BEST, CASAS, accepted by the National Reporting System for federal record-keeping. When programs use item analyses or diagnostics in addition to these tests, the results can be useful in planning instruction and, to some degree, in progress evaluation. (For Item Analyses based on the TABE tests, contact the Virginia Adult Learning Resource Center as cited in the Resource Section.)

For those learners who are at or near the high school reading or math level at intake, some learning centers will give a section of the Official GED Practice Tests as part of the procedure. If this is necessary, we suggest you use GED Practice Test Form A, or PA, so that the Practice Test forms B and C can be set aside for progress and final predictive tests. However, *GED as Project* will build in taking the Practice Test, topic by topic, in the introductory Learning Projects for each content area. If the tests can be taken then, instead of during intake, the learner will be able to take full advantage of the thinking process we are advocating.

Disabilities

Guidebook 1 of the National Institute for Literacy's *Bridges to Practice* states that from 3 to 15 percent of the general population of American adults display learning disabilities. Within our adult learning population, the perception is that the numbers are significantly higher. "Research has yet to determine just what the proportion is; estimates range from 30 to 80%" (p. xi.) These learning disabilities, often undiagnosed, include varying levels of difficulty with listening, thinking, speaking, reading or writing.

GED instructors must meet a vast array of levels and styles of learning. Because of the group work, and the careful attention to the process of thinking and learning promoted by this guide, we believe this approach to study can work effectively with students with learning disabilities.

Accommodations should be provided as they would in any GED class, from straight-edges to audio tapes, and, in keeping with good instruction, special one-on-one assistance should be provided as needed. Accommodations can be built into any learning project to adapt to learners of varying abilities within the range of the GED class.

An exhaustive study of assessment and accommodations for the learning disabled student is beyond the range of this guide, but friendly and accessible resources are available in abundance. A primary resource is the GED Testing Service Web site, which you will find in the Resources Section at the end of this guide. The excerpt from the Web site offers a quick sketch of what a formal assessment of a learning disability would mean:

In order to determine if someone has a learning disability, psycho/educational assessment is necessary. This assessment compares a person's intellectual potential profile, information processing and developmental history with a person's current academic achievement. A person with a learning disability will have average to above average intellectual potential with a pattern of relative strengths and weaknesses. Those areas of weakness will represent the area of information processing weakness. The areas of processing weakness can be expected to significantly interfere with academic achievement. To determine if these characteristics are present psychologists, neurologists, and educators do evaluations or assessments. Diagnosis is based on significant differences in standard score comparisons.

This site also provides a section on accommodations and directions on how to fill out an L-15 form, which is necessary to obtain accommodations on the GED test itself for your student.

In short, assessment takes many forms. For *GED as Project*, the Official GED Practice Test provides both pre- and post-testing, as well as instructional stimuli, while the Learning Projects within the guide provide a means of on-going assessment in keeping with the instructional approach.



Section 5:

Managing The GED as Project Classroom

Here are some tips to consider as you implement *GED as Project* in the classroom. When you begin to use the *GED as Project* approach, you may need to check this list regularly to help you prepare. You may want to add your own pointers to the list as well.



1. Prepare your classroom physically to make learning easier.

- Post an enlarged copy of both the General Template and the specific subject matter templates on your wall for learners to see from the outset.
- Arrange the room to facilitate students' getting together in small groups; move tables and chairs out of the rigid rows.
- Have plenty of resources on hand: GED books, pamphlets, dictionaries and newspapers. Make independent research materials accessible.
- Try to have enough copies of the PA practice test (used as the stimulus for these Inquiry Activities) for each learner to have one. They will take this test in each subject, as well as look through it for "The GED and You" Learning Project.
- Keep forms PB and PC separate. These practice tests are for testing learner progress, and their scores will not be valid if they are a part of instruction.
- The Student Versions of the Inquiry Activities have blank spaces for the learners to record their answers; the Instructor Versions have answers and suggestions on instructions.

2. Keep the class focused on the inquiry process.

GED as Project is a problem-based approach to learning. Being a different approach to learning for most, it will require some practice. We want learners to be excited about and vested in this process, so that they can use it for the GED and transfer it to other areas of their lives.

3. Create a climate that reinforces the idea that each learner is important and essential, with unique talents and strengths to contribute to the progress of the entire class toward passing the GED.

- Allow learners and yourself to acknowledge that learning is occurring; be able to express your discomfort with the process.



- Frequently ask *why* to help learners articulate their thought processes and to create continuing threads through all the content areas.

- Use concept mapping of the subjects learned and how they relate.
- Develop a GED Learning Portfolio made up in part with completed Inquiry Activities.
- Use "GED and You Revisited" regularly.

4. Strive to achieve an integrated multi-level GED as Project classroom.

Many different levels of knowledge and ability will be present in your class; they can be best facilitated by following the Inquiry Activity Template and by:

- Providing one-on-one help as needed;
- Giving Burst Lectures when learning cannot continue without laying a foundation or straightening out a misunderstanding that is impeding progress;
- Using Just-in-Time assessments that help you identify individual students' needs;
- Giving careful attention to good facilitation skills and creating a safe environment so that even the most reticent learners can eventually acknowledge what they don't know and can get help.

5. Ask good questions to support the thinking process.

- Keep the questions open-ended.
- Get away from the right/wrong answer mentality – help learners to learn from mistakes and to explore the thinking behind them.
- Ensure that all three types of intelligence: creative, practical and analytical are used at some point.
- Refer to the Facilitator Section (#3) for ways to ask questions.

6. Use your favorite additional resources.

Even though this approach focuses on covering material using the Practice Test questions and the abundance of content that is found in them, students benefit from a variety of media and stimulus. If a *Workplace Essential Skills* video is appropriate, build it into a phase of the



Inquiry Activity (see Resources.) If a computer lab is available, take advantage of internet activities and on-line learning. Good print resources are referred to in the Inquiry Activities, and work with them can be as extensive as needed. The only caveat is that the thinking process remains the central focus of the learning.

7. Let your assessment methods continue to support the thinking process.

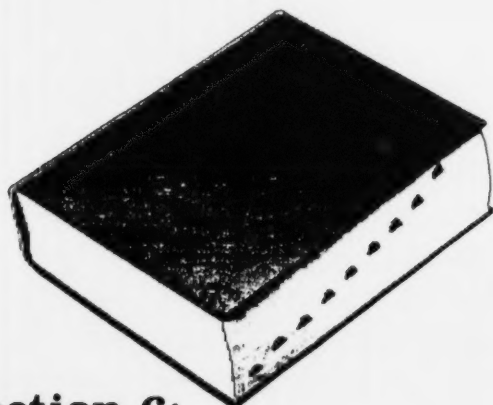
Consider and continue to use:

- "GED and You"
- "GED and You Revisited"
- "GED and You" for each subject area

Other assessments such as intake diagnostics, teacher-made tests, and workbook practices help measure learners' progress. Implement these assessments with as much inquiry, attention to thinking, and partnering with the student as possible.

8. Work toward the goal of managed entry/managed exit as much as is possible in your area.

It is difficult to keep consistency in groups and to build on previous activity when learners constantly appear and disappear.



Section 6:

Learning Project: "The GED And You"

Introduction

"The GED and You" is the first Learning Project in *GED as Project*. It is made up of three Inquiry Activities: "Exploring the GED in General," "Exploring Reading, Study and Test-taking Habits," and "Developing an Individual Action Plan." Going through this learning project not only will give learners information about the GED that may be useful, but they will also be introduced to the exploratory nature of the learning that will take place throughout the rest of the course. It will show them how a learner-centered, as opposed to teacher-centered, classroom operates. "The GED and You" lays an important foundation for the teaching methodologies used in this framework.

As we introduce the *GED as Project* process we will visit the classroom of Mrs. Harriman to gain insight into how this process translates to a classroom with an instructor and learners (Figure D).

Mrs. Harriman begins with an interactive and exploratory introduction activity where the learners get to know one another.

Figure D

Ms. Harriman's GED class meets for the first time

Mrs. Harriman is meeting her fall GED preparation class for the first time tonight. This year she has 14 people ranging in age from 17 to 55, six men and eight women. While two of the women, Eshel and Theresa, know one another, the others are not yet acquainted. Each member of the class has been through the program's intake process, and all are comfortably in the range for GED preparation. Mrs. Harriman introduces herself, sharing her background and her experience with teaching GED preparation courses. She then asks each person to find a partner to interview, using the form she's prepared. It is important to note that she also asks each person to add one question to the form that they would like to ask.

INTERVIEW FORM

1. What is your name?
2. How long does it take you to get here from home or work?
3. Why did you decide to come to this GED preparation program?
4. What are your three favorite foods?
5. What is your favorite TV show?
6. Tell about a book you read or a movie you saw that you liked.
7. When you get your GED, what do you imagine yourself doing with it?
8. What is good about having a GED test, and what don't you like about it?

After the partners have had a chance to talk with one another, Mrs. Harriman asks partners to pair up with another partner team and introduce one another. She then asks the groups of four to decide on four things they will share with the group when introductions are complete. Mrs. Harriman then tells the class that knowing one another will be important as everyone prepares for taking the GED, since the goal of passing the GED is something they will be working on together. She tells them that once introductions are done, they will start right in with the GED practice test to explore it and decide how best to approach it both individually and as a group.



Learners and instructors become familiar with the GED by exploring the test from a personal perspective. Learners are guided to examine their perceptions about the GED, their decision to pursue the GED, and others' thoughts about the test. They are encouraged to look through available GED materials, including the Official Practice Test, to help answer the questions in the Inquiry Activity or questions that they may have. Decide whether the learners might be given the Official Practice Test, not for the purpose of taking it, but for reviewing it to identify the kinds of questions and subjects that are on the test.

In Inquiry Activity #2, the learners reflect on their reading, study and test-taking habits so they can choose how to use, develop and modify their present skills, as well as learn new ones for the purpose of passing the GED.

Learners then take the information from the first two Inquiry Activities to develop their own Action Plan in Inquiry Activity #3. This begins developing the crucial critical thinking, writing and planning skills early in the process.

Because this is an overview of the exploratory practices in which they will be engaged, the learners should be given the activities in the sequence indicated. You can revise and add to the questions in these Inquiry Activities according to the interests of the class, maintaining the self-discovery, exploratory process. The learners examine for themselves the questions asked in these and other Inquiry Activities. Taking responsibility for their own learning will build the understanding of how active learning takes place.

The Inquiry Activity instructions presented here are in an Instructor guide format. The Learners' instructions are in italics. The Learners' version, which follows the Instructor's, includes spaces for writing notes and answers. The Inquiry Activity instructions and questions may be presented orally, in writing, in part or in their entirety. The augmented headings in the content areas are test-taking strategies to be used while taking the test itself. The more experience the learners have with the process clearly spelled out, the easier it is for them to internalize and use the process during the test.

Ground Rules For Problem-Centered Learning

Your learners must clearly understand the ground rules of problem-centered learning as it is used in *GED as Project*. Let's revisit Mrs. Harriman's class.

Ms. Harriman's and the Ground Rules

As a way to further our process of learning for passing the GED Test, I am distributing a list of ground rules for problem-centered learning (see below). I would like us to read these rules silently to ourselves, and then we will have various class members read them aloud.

Now that we have both read and heard the ground rules, let's think about them and discuss them, first in pairs or small groups, and then as a full group. Please discuss whether the rules make sense to you. Look at the first ground rule about questioning. How is this like or not like what you have done in previous learning situations? In what other situations do you explore? How might you relate that situation to your GED preparation?

With reflecting questions: when or where else might you ask yourself these kinds of questions? Why do you think they matter here? How will they assist you in passing the GED?

With extending questions: what might be the point of these? How will they help us? What will we have to watch out for?

In evaluating questions: when and where else do we use this kind of thinking? What does it help us do? Why will it matter here?

You may wish to cover this information prior to the first Inquiry Activity. You could distribute the list of ground rules and ask members of the group to read it aloud and discuss the process. Encourage questions and comments. These ground rules must be reinforced through the instructor's response to learners' questions and answers throughout the course.

Ground Rules: Asking And Answering Questions

Asking and answering questions will not always be focused on getting and giving the one right answer. Many questions do not have one right answer. Think about what is being asked and express your opinion or point of view.

- For questions that do have a right answer, do not hesitate to answer for fear of being wrong. Wrong answers can be a step towards the right answer, thereby providing a learning opportunity for everyone.
- When answering a question based on your prior knowledge or opinion, support the answer or opinion with an explanation.
- Be an active learner and thinker.
- Be willing to answer questions; even if you have to guess. There are no wrong answers.



GED And You Inquiry Activity #1:

Exploring The GED In General

1. Identifying The Problem (in groups)

The problem the learners have to explore in this Inquiry Activity is finding out about the GED.

You as learners will be exploring What is the GED? You will be asked to find answers to the following questions, as well as the questions you and your group generate:

1. What is the GED?
2. What subjects are tested?
3. How long will you be given to take each section of the test?
4. How many questions does each section contain?
5. What are the scores needed to pass?
6. What do the letters GED stand for?

Reread the questions above and discuss with your group (and/or the instructor if necessary) what the questions mean. Briefly discuss with your group why the GED is important to you. Make a list of questions that you and the group have about the GED other than the six already given. Don't try to answer the questions yet; just write them down.

This section develops an understanding of the questions to be asked. It does not get into possible answers or what is currently known about the subject.

2. Becoming Familiar With The Problem (work individually)

This step is part of the test-taking process, and even though the learners are not working on an actual GED problem, they should follow the steps, becoming so familiar with the process that it becomes second nature to them at test-taking time.

1. What do you already know about the GED? Write down some notes on what you know.
2. Do you need additional resources to answer the questions posed by your GED facilitator and your classmates? Which resources will you need?
3. Take some time to look at the resources available, including a copy of an Official GED Practice Test. Evaluate them to determine which books or what sections of the books might give you some answers to the class questions set forth in Identifying The Problem.

Do not try to answer the questions at this time.

Just evaluate the resources to determine which you will need to be successful.

3. Planning, Assigning And Performing Tasks (go back into same groups)

Planning

One of the principles of active learning is that the learners take more and more responsibility for their own learning, rather than being too instructor-directed. One of the ways this is accomplished is through planning, assigning and performing tasks. You can guide learners in groups at the beginning, when this idea is very new to them. As the learners work through more Learning Projects and Inquiry Activities, they should be taking more and more control over the process outlined in this step.

As a group, discuss the six questions that are asked in Step 1 and the questions you posed to one another.

Assigning

The groups can decide how they will assign the tasks to get the work done. The group will determine how to share the resource materials among the group members. You, as facilitator, can guide the group in this initial assigning step since it is the first time they will have done it. Groups will soon become more self-directed.

When the groups of learners start researching, they should give the title and page number of the book where the answer can be found.

Performing

Doing the Work

Individuals search for the answers to the questions they were assigned by the group, giving the name of the book and the page number where the information was found.

Individually or in pairs, answer the questions and support your answers to the questions with your reasons. Give the title and page number of the book, and summarize the information there that supports your answer. (You can write your answers on page 1 or on a separate piece of paper.)

Reaching a Conclusion

After the group members do the work they were assigned, they come back together and discuss the results of their investigation. The group then reaches conclusions regarding all the questions (both class- and group-generated) and their support for the answers.

Discuss the answers the group members came up with (including the support and book references) and draft answers to all the questions, including the questions of the individuals.



The group then determines how to report its findings to the class. There could be many ways to present the material, such as skits, or audience participation, as well as the more traditional methods of lecture, handouts, or PowerPoint presentations. The groups should be encouraged to explore different ways to present the material.

Prepare to present your findings to the rest of the class. Assign tasks for all group members to share in making the presentation. The group will also determine five things they learned during this Inquiry Activity.

4. Sharing With Others

The group will present its material to the class and lead a discussion, if classmates have questions. You will serve as moderator. If the group feels uncomfortable leading a discussion, you can assist. At first, groups will be hesitant, but will soon learn to present and involve their group and the class.

Each group will present its answers and findings, including the support and reference(s) to book and page numbers, to the rest of the class. It might be interesting to compare explanations in the different resource materials that the adult learners use. (Gets at analytical and evaluation skills.)

5. Reflecting, Extending And Evaluating

During this activity, you will lead this step. Later on the groups themselves can lead these discussions. Encourage learners to speak up.

Reflecting: Think about what you learned.

Reflecting questions often cause us to analyze our actions or assess our understanding of what we have learned. Reflection questions will include:

Analytical

1. What new information did you get from this activity?
2. What surprised you? Why?
3. What is one new question you have now as a result of your review of the resource material?
4. What did you learn about yourself?

Practical

5. Where have you encountered this kind of information in your life?
6. How might you concentrate on building your strengths for the GED?

Creative

7. How might other people view the work you have just done?
8. How might your boss, or other people, use the information you have found?

Extending: Extend what you learned to new situations.

Extending questions ask us to take what has been learned and apply it to other subjects or aspects of what we are doing.

Analytical

1. How else might you use what you learned in this activity?

Practical

2. How might you take what you have learned here and use it in your work?
3. Where have you encountered this kind of information in your life?

Creative

4. Imagine you are a test question writer and write a new question.
5. What kind of test would you create if you were in charge of the GED?
6. If you met an expert in this area, what question would you ask him/her?

Evaluating: Assess what you learned and how you learned it.

Rather than telling what worked, the approach encourages exploration, teamwork, analysis and discovery, engaging everyone right away in the skills necessary to be successful on the GED 2002. Here are some of the questions you can ask:

1. Compare resources: Which resources helped to answer your individual questions?
[Note: The suggestion to compare different sources of information for the same answers starts the learner on building context, constructing knowledge and evaluating material, important skills necessary for success on the GED 2002.]
2. How do you like learning using exploration and discussion?
3. How do you like learning in groups?
4. What can you learn from sharing your information with the rest of the class?
5. How will passing the GED affect your ability to get a job or advance at work?
6. How will you balance job, family, or other responsibilities to make time to study for the GED?

Student Name

Date

Class

Instructor

Learning Project: GED and You**Student Inquiry Activity 1: Exploring the GED in General****1. Identifying the Problem**

You as learners will be exploring *What is the GED?* You will be asked to find answers to the following questions, as well as the questions you and your group generate. (Don't answer these questions.)

1. What is the GED?
2. What subjects are tested?
3. How long will you be given to take each section of the test?
4. How many questions does each section contain?
5. What are the scores needed to pass?
6. What do the letters GED stand for?

Reread the questions above and discuss with your group (and/or the instructor if necessary) what the questions mean. Briefly discuss with your group why the GED is important to you. Make a list of questions that you and the group have about the GED, other than the six already given. Don't try to answer the questions yet; just write them down.

2. Becoming Familiar with the Problem

1. What do you already know about the GED? Write down some notes on what you know.

2. Do you need additional resources to answer the questions posed by your GED facilitator and your classmates? Which resources will you need?

3. Take some time to look at the resources available, including a copy of an Official GED Practice Test. Evaluate them to determine which books or what sections of the books might give you some answers to the class questions set forth in Identifying The Problem. Do not try to answer the questions at this time. Just evaluate the resources to determine which you will need to be successful.

3. Planning, Assigning and Performing Tasks

Planning: As a group, discuss the six questions that are asked in Step 1 and the questions you posed to one another.

Performing

Doing the Work: Individually or in pairs, answer the questions and support your answers to the questions with your reasons. Give the title and page number of the book and summarize the information there that supports your answer. (You can write your answers on page 1 or on a separate piece of paper.)

Reaching a Conclusion: Discuss the answers the group members came up with (including the support and book references) and draft answers to all the questions, including the questions of the individuals.

Prepare to present your findings to the rest of the class. Assign tasks for all group members to share in making the presentation. The group will also determine five things they learned during this Inquiry Activity.

4. Sharing with Others

Each group will present its answers and findings, including the support and reference(s) to book and page numbers, to the rest of the class.

5. Reflecting, Extending, and Evaluating

Reflecting: *Think about what you learned.*

1. What new information did you get from this activity?
2. What surprised you? Why?
3. What is one new question you have now as a result of your review of the resource material?
4. What did you learn about yourself?
5. Where have you encountered this kind of information in your life?
6. How might you concentrate on building your strengths for the GED?
7. How might the other people view the work you have just done?
8. How might your boss, or other people, use the information you have found?

Extending: Extend what you learned to new situations.

1. How else might you use what you learned in this activity?
2. How might you take what you learned here and use it in your work?
3. Where have you encountered this kind of information in your life?
4. Can you imagine you are a test question writer and write a new question?
5. What kind of test would you create if you were in charge of the GED?
6. If you met an expert in this area, what question would you ask him/her?

Evaluating: Assess what you learned and how you learned it.

1. Compare the resources: Which resources helped to answer your individual questions?
2. How do you like learning using exploration and discussion?

3. How do you like learning in groups?
4. What can you learn from sharing your information with the rest of the class?
5. How will passing the GED affect your ability to get a job or advance at work?
6. How will you balance job, family, or other responsibilities to make time to study for the GED?



GED And You Inquiry Activity #2:

Exploring What Learners Know About Their Reading, Study And Test-Taking Habits

1. Identifying The Problem

The questions learners are exploring in this Inquiry Activity are personal to them. Encourage them to think about prior learning situations, something they may not have done in some time.

The questions that you will explore in this Inquiry Activity are designed to help you understand some of your strengths and weaknesses. At this first step, just read these questions; don't answer them. You will soon get a chance to answer these in full. This problem asks you to assess yourself with regard to what your reading, study and test-taking habits are.

The purpose of this first step is to read the question carefully. If any question is confusing to you, talk to a fellow learner or the instructor about the meaning of the question. Don't be afraid to ask the question(s) in a way that makes sense to you.

1. List at least three reasons why you are taking the GED. (Give as much detail as possible.)

2. There are five general areas tested by the GED: Math, Writing/Grammar, Science, Social Studies and Reading. Which of the five areas do you feel you know the most about? Why?
3. Consider each subject area of the GED one at a time, beginning with the one you feel you know the most about and are most comfortable with. Describe why you are comfortable with that area. What else do you think you need to learn in this subject area to be successful at passing the GED?
4. Move to the next subject area of the GED. What would you like to know in this subject area so you can be successful at passing the GED?
5. Which area(s) do you feel you know the least about? What makes you think this? What would you like to know in this subject area to be successful at passing the GED?
6. How often do you read a day?
7. What kinds of materials do you read?
8. How well do you do on tests in general? Explain.
9. What do you think test-taking skills are? Describe them.
10. What test-taking skills would you like to know more about to be successful in passing the GED?
11. What do you think study habits are? Describe them.
12. What kind of study habits do you think you need to develop in order to pass the GED?

An Approach To Preparing For Inquiry Activity #2

We are here to pass the GED. To do so we must draw on our strengths as learners and develop new skills for learning and taking the GED test. We must also learn new content in the areas of reading, writing, math, science and social studies. To set ourselves up for success, we must explore our own previous experience of what success looks and feels like for us. So for the next five minutes, I invite you to close your eyes and think about a time when learning went well for you. This could be a time when you were at home, at work, at church, with your friends, your family, with a club or with a teacher. It could be a time when you learned to install a new appliance, sew a new pattern, plant a new plant, complete a new form, build a new piece of furniture, or repair a car. It may be a time when you learned to read a new book or do a new math problem



or learned some new information about history, science, or technology. Recall the success you felt. See what you were doing that contributed to your success and see what others were doing that contributed to success.

Now, slowly, when you are ready, open your eyes and write down or describe into a tape recorder what you saw and recall from your successful learning experience. You may want to share this with a partner. Now, as a total class let's share some of our insights.

2. Becoming Familiar With The Problem (individually)

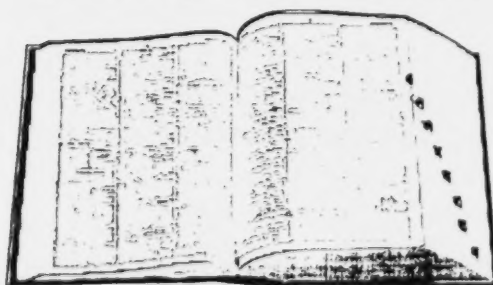
Now that you understand the questions, think about how you will answer them. Think about the various things you want to consider when you start to answer the questions. You may even want to go back to the questions in step 1 and make some preliminary notes beside each of the questions while you are thinking about the topics.

Your responses to these questions serve as a foundation for work to come, including your Action Plan. Take all the time you need to become aware of your motivation for taking the GED and your view of the test topics.

3. Planning, Assigning And Performing Tasks (individually)

Planning

This Inquiry Activity is to be done individually. You will decide how you will proceed. Here are some suggestions to plan your work. Determine how you will use the notes you may have made or how you will respond to the questions. You might want to talk into a tape recorder, draw pictures, or talk with a friend. Remember, sometimes when others are working alone, they may not wish to be interrupted. Make sure the person you approach can provide you help when you ask. How else might you do the work? There is no right way to do this, except the way that works best for you.



The learners should be made comfortable in their exploration of their own habits. They may be looking for the exact way to do this, but your response should be to encourage them to find their own way and be comfortable with it.

Notice the method of slowing them down from immediately trying to answer the questions to thinking more about the process of answering the question. This is an important step in the thinking process, the test-taking process, and the writing process as well. The learners should know that the process used here has implications for test-taking and thinking that will be made clear to them as they work through the Learning Projects and Inquiry Activities in GED as Project.

Consider whether you will use any materials or answers from the prior Inquiry Activity. If so, where and how will you get them? How much time do you have for this task? How much time do you think it will take? Take some notes as to how you will go about answering these questions.

Assigning

Since this is an individual project, the individual will do the entire activity.

Performing

Doing the Work

Now, do the work as you have planned – that is, go back to step 1 and write down answers to all the questions.

Reaching a Conclusion

Now that you have reviewed the GED material, if you still have some questions, write them down here so you can discuss them with your classmates.

4. Sharing With Others

There will be two sharing activities here. One is a sharing with a group, and the other is the group sharing with the rest of the class.

You will form a group with some of your classmates.

Discuss the following points in your group:

- First:** Share your answers with your partner or small group.
- Second:** Discuss questions you may have had but could not find answers to.



GED as Project

Pathways to Passing the GED

- Third:** As a group, make a list of what study habits the group thinks will be needed to study for and pass the GED.
- Fourth:** Discuss the reading habits of each group member and determine how important reading is to success in passing the GED.
- Fifth:** Prepare to report your answers to these questions to the rest of the class.

Each group now presents its findings to the rest of the class and leads a discussion.

5. Reflecting, Extending And Evaluating:

Reflecting: Think about what you learned.

This is the opportunity for the learners to think about their own traits as learners. Again help them realize that there are no right answers to any of these questions. Help them examine critically their own skills in relation to the GED. The following questions are analytical questions:

1. What did you learn about yourself in this exercise?
2. What did you learn about the GED that you didn't know before?
3. Why do you think the GED test exists?
4. Do you think the GED assesses important skills? Why or why not?

Extending: Extend what you learned to new situations.

Analytical

1. How can reading more be helpful in your daily life?
2. What are some different things you can do to help you study?

Creative

3. Create a new study habit. Who would use it and why?
4. If a dog were to study, how do you think it would happen?

Practical

5. In your job or at home, name some opportunities you would have to practice math problems.
6. At home, how would you use some of the science that is tested on the GED?

Evaluating: Assess what you learned and how you learned it.

Here are some questions to help you evaluate what you learned and how you learned it.

1. How do you like learning in groups? What aspect of group work is getting easier?
2. How did your exploration efforts work for you in this activity?
3. How did the talking about and sharing work for you?
4. How was your experience similar to the previous Inquiry Activity?
5. How was it different?
6. In the group situation, there are times when you talk and times when you listen. How are they different?
7. What might you learn when talking?
8. What might you learn when listening? Why do you think that is?

Student Name

Date

Class

Instructor

Learning Project: GED and You**Student Inquiry Activity 2: Exploring Reading, Study, and Test-taking Habits****1. Identifying the problem**

The questions that you will explore in this Inquiry Activity are designed to help you understand some of your strengths and weaknesses. At this first step, just read these questions; don't answer them. You will soon get a chance to answer these in full. This problem asks you to assess yourself looking at what your reading, study and test-taking habits are.

The purpose of this first step is to read the question carefully. If any question is confusing to you, talk to a fellow learner or the instructor about the meaning of the question. Don't be afraid to ask questions in a way that makes sense to you.

1. List at least three reasons why you are taking the GED. Give as much detail as possible.

2. There are five general areas tested by the GED – Math, Writing/Grammar, Science, Social Studies, and Reading. Which of the five areas do you feel you know the most about? Why?

3. Consider each subject area of the GED one at a time, beginning with the one you feel you know the most about and are most comfortable with. Describe why you are comfortable with that area and what else you think you need to learn in this subject area to be successful at passing the GED.
4. Move to the next subject area of the GED. What would you like to know in this subject area to be successful at passing the GED?
5. Which area(s) do you feel you know the least about? What makes you think this? What would you like to know in this subject to be successful at passing the GED?
6. How often do you read a day?
7. What kinds of materials do you read?
8. How well do you do on tests in general? Explain.
9. What do you think test-taking skills are? Describe them.

10. What test-taking skills would you like to know more about to be successful in passing the GED?
11. What do you think study habits are? Describe them.
12. What kind of study habits do you think you need to develop in order to pass the GED?

2. Becoming Familiar with the Problem (individually)

Now that you understand the questions, think about how you will answer them. Think about the various things you want to consider when you start to answer the questions. You may even want to go back to the questions in step 1 and make some preliminary notes beside each of the questions while you are thinking about the topics.

Your responses to these questions will serve as foundation for work to come, including your Action Plan. Take all the time you need to become aware of your motivation for taking the GED and your review of the test topics.

2. Planning, Assigning and Performing Tasks

Planning: This Inquiry Activity is to be done individually. You will decide how you will proceed. Here are some suggestions to plan the work.

Determine how you will use the notes you may have made or how you will respond to the questions. You might want to talk into a tape recorder, draw pictures, or talk with a friend. Remember, sometimes when others are working alone, they may not wish to be interrupted. Make sure the person you approach can provide you help when you ask.

How else might you do the work? The right way to do this is the way that works best for you.

Consider whether you will use any materials or answers from prior Inquiry Activities. If so, where and how will you get them? How much time do you have for this task? How much time do you think it will take? Take some notes as to how you will go about answering these questions.

Performing

Doing the Work: Now do the work as you planned; that is, go back to step 1 and write down answers to all the questions.

Reaching a Conclusion: Now that you have reviewed the GED material, if you still have some questions, write them down here so you can discuss them with your classmates.

3. Sharing with Others

You will form a group with some of your classmates. Discuss the following points in your group:

- First: Share your answers to the questions with your partner or small group.
- Second: Discuss questions you may have that you couldn't find answers to.
- Third: As a group, make a list of what study habits the group thinks will be needed to study for and pass the GED.
- Fourth: Discuss the reading habits of each group member, and determine how important reading is to success in passing the GED.
- Fifth: Prepare to report your answers to these questions to the rest of the class.

Each group now presents its findings to the rest of the class and leads a discussion.

4. Reflecting, Extending and Evaluating

Reflecting: Think about what you learned.

Here are some questions to think about:

1. What did you learn about yourself in this exercise?
2. What did you learn about the GED that you didn't know before?
3. Why do you think the GED test exists?
4. Do you think the GED assesses important skills? Why or why not?

Extending: Extend what you learned to new situations.

Here are some questions to help to extend your knowledge to new situations:

1. How can reading be more helpful in your daily life?
2. What are some different things you can do to help you study?
3. Create a new study habit. Who would use it and why?

4. If a dog were to study, how do you think it would happen?
5. In your job or at home, name some opportunities you would have to practice math problems.
6. At home, how would you use some of the science that is tested on the GED?

Evaluating: Assess what you learned and how you learned it.

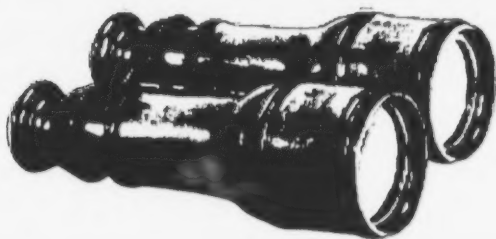
Here are some questions to help you evaluate what you learned and how you learned it.

1. How do you like learning in groups? What about the group work is getting easier?
2. How did your exploration efforts work for you in this activity?
3. How did the talking about and sharing work for you?
4. How was your experience similar to the previous Inquiry Activity?
5. How was it different?

6. In the group situation, there are times when you talk and times when you listen. How are they different?

7. What might you learn when talking?

8. What might you learn when listening? Why do you think that is?



GED And You Inquiry Activity #3: Draw Up An Individual Action Plan

Mrs. Harriman and the Action Plan

Now that we have explored and talked about what the GED is for us and examined our study habits and test-taking skills, our next steps will be setting our sights on a successful future and planning what we need to do to study for, take and pass the GED. As we have done before, we are going to:

1. Identify the Problem (situation)
2. Become Familiar with the Problem
3. Plan, Assign, and Perform Tasks
4. Share with Others, and
5. Reflect, Extend and Evaluate

An Action Plan form is available to you. *Identify* what you think the form is asking for. Do the questions make sense to you? Do you understand what it is and why it will be useful? If you do, then *become familiar* with the plan. How will you complete it? What other information might you need to complete the plan? Do you think your plan is something you will write out? Will you do it in pencil or pen or on the computer or will you tape record your plan? How much time do you think creating a plan for you will take?

Now, *plan and do the work*. Are you going to create a first draft and then do a final draft? We have time in class tonight. Plan how you will use this time and then plan how you will use your time between now and the next class. Next time, we will *share and reflect, extend and evaluate*.

1. Identifying The Problem

You can hand out the Action Plan found in Appendix 2, which the learners will use in this Activity. Guide them in the process of doing each step as indicated in this outline

without immediately rushing towards filling out the Plan.

Here is your chance to bring everything you have discovered about yourself and the GED together. Here you will create a plan for studying, taking and passing the GED. Before you complete the plan, read it all the way through and study it carefully.

You will use the Action Plan form your instructor will give you. Do not try to fill it in yet. Look at what the plan asks you to do and make sure you understand everything.

This is your plan. There are no rights or wrong ways to prepare for passing the GED. There is only what you are willing to do and commit yourself to.

2. Becoming Familiar With The Problem

As you become more familiar with the Action Plan as a tool for preparing to take and pass the GED, consider:

- Reviewing all of the information from the previous Inquiry Activities;
- Reviewing your understanding of the information the Action Plan is asking from you;
- Thinking about how you are going to develop a personal Action Plan, and making some notes;
- How your home study situation, your transportation to get to class, your work schedule, and other family needs will influence your Plan. Make some notes;
- List any questions you have that could be answered by your instructor or another class member.

3. Planning, Assigning And Performing Tasks Planning

Read over the Action Plan and any notes and questions you now have. Focus on what you need to do to successfully study for and pass the GED.

Assigning

This is an individual activity. You will be doing the work by yourself.

Performing

Doing the Work

Taking everything you have learned and thought about in the Inquiry Activities to this point, develop a plan of action that you can follow to help you study for, take, and pass the GED. Take into account why you want to pass the GED, your study habits, the kind of test the GED is, your reading habits, your ability to come to class, and anything else that can impact your goal – passing the GED.



Reaching a Conclusion

Fill out the Action Plan form.

4. Sharing With Others

Ask learners if they might be interested in sharing their Plan with a partner or a small group. Arrange for those who want to share with others to do so and those who would prefer to share only with you to do so now, or schedule a time to meet. The learners can gain a great deal from each other when sharing. They also begin to understand that they are not the only ones with difficult situations to overcome.

At the very least, each class member should share his or her Action Plan with you, since there will be many times throughout the course when he or she is asked to revisit and possibly revise the plan, based on changing circumstances and new knowledge obtained. Learners should share their Action Plan with you as part of your role as guide and counselor.

You will share your Action Plan with your instructor so that he/she can help you during the course to build upon your strengths and help you through some of your weaknesses. You may also want to share your Action Plan with at least one other class member.



5. Reflecting, Extending And Evaluating
Reflecting: Think about what you learned.

Here are some questions for reflecting on this Learning Project:

1. *What do you think you have to do to pass the GED? Why?*
2. *How might you share your plan for passing the GED with others outside of this class?*
3. *How has this activity helped to focus your efforts on your goal?*

Extending: Extend what you learned to new situations.

Here are some questions to help extend learning:

1. *Can you invent an action plan for use by someone else?*
2. *How do you imagine yourself using this new action plan?*
3. *Where else might this plan be used?*

Evaluating: Assess what you learned to new situations.

Here are some questions to help the learner evaluate the process:

1. *How good are you at following a plan that you develop?*
2. *Can you give an example of a plan you have followed and one you did not follow? Describe what happened in each case.*
3. *How did this process work for you?*
4. *What could have been improved? How?*
5. *What is one thing you might do to improve this process?*
6. *What is one thing your instructor could do to improve this process?*
7. *What is one thing your classmates might do to improve this process?*

Student Name

Date

Class

Instructor

Learning Project: GED and You

Student Inquiry Activity 3: Draw Up an Individual Action Plan

1. Identifying the problem

Here is your chance to bring everything you have discovered about yourself and the GED together. Here you will create a plan for studying, taking and passing the GED. Before you complete the plan, read it all the way through and study it carefully.

You will use the Action Plan form your instructor will give you. Don't try to fill it in yet. Look at what the plan asks you to do and make sure you understand everything.

This is your plan. There are no right or wrong ways to prepare for passing the GED. There is only what you are willing to do and commit yourself to.

2. Becoming Familiar with the Problem (individually)

As you become more familiar with the Action Plan as a tool for preparing to take and pass the GED, consider:

- Reviewing all of the information from the previous Inquiry Activities.
- Reviewing your understanding of the information the Action Plan is asking from you.
- Thinking about how you are going to develop a personal Action Plan and making some notes.
- How your home study situation, your transportation to get to class, your work schedule and other family needs will influence your Plan. Make some notes about these.

- List any questions you have that could be answered by your instructor or another class member.

3. Planning, Assigning and Performing Tasks (individual)

Planning: Read over the Action Plan and any notes and questions you now have. Focus on what you need to do to successfully study for and pass the GED.

Assigning: This is an individual activity. You will be doing the work by yourself.

Performing

Doing the Work: Taking everything you have learned and thought about in the Inquiry Activities to this point, develop a plan of action that you can follow to help you study for, take and pass the GED. Take into account why you want to pass the GED, your study habits, the kind of test the GED is, your reading habits, your ability to come to class and anything else that can impact on your goal – passing the GED.

Reaching a Conclusion: Fill out the Action Plan form.

4. Sharing with Others

You will share your Action Plan with your instructor so that he/she can help you with it during the course to build upon your strengths and help you through some of your weaknesses. You may also want to share your Action Plan with a least one other class member.

5. Reflecting, Extending and Evaluating

Reflecting: *Think about what you learned.*

1. What do you think you have to do to pass the GED? Why?
2. How might you share your plan for passing the GED with others outside of this class?

3. How has this activity helped to focus your efforts on your goal?

Extending: Extend what you learned to new situations.

1. Invent an action plan for use by someone else.
2. How do you imagine yourself using this new action plan?
3. Where else might this plan be used?

Evaluating: Assess what you learned and how you learned it.

1. How good are you at following a plan you develop?
2. Give an example of a plan you have followed and one you did not follow. Describe what happened in each case.
3. How did this process work for you?
4. What could have been improved? How?

5. What is one thing *you* might do to improve this process?

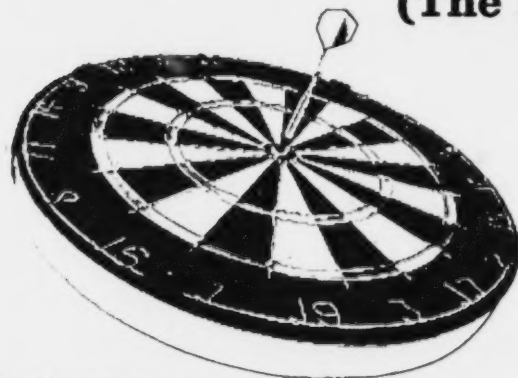
6. What is one thing *your instructor* could do to improve this process?

7. What is one thing *your classmates* might do to improve this process?



Section 7:

Learning Project: "The GED And You" Revisited (The Learning Portfolio)



Introduction

The learners' observations about the GED, their evaluations of their test-taking skills and knowledge acquisition, as well as their individual Action Plans developed during the initial class meetings should be revisited on a periodic basis during the course. The learner's Action Plan will be revisited as part of the Learning Project that starts each of the content courses (i.e.: "GED Math and You," "GED Social Studies and You," etc.). Each of those Learning Projects has an Inquiry Activity that asks the learner to look again at his or her Action Plan in light of the experience the learner has had to date.

This Learning Project, "The GED and You Revisited," can be used in the middle of a content course, at regularly scheduled times or occasionally as you, the facilitator, determine. "The GED and You Revisited" is an informal assessment that can be given in addition to more formal assessment activities, such as retesting on some form of standardized test or another version of the Practice GED.

These revisits to the Action Plan are ongoing and will allow the learners to measure their greater understanding of skills and content acquisition as they experience the GED course, building a GED Learning Portfolio of their progress throughout the course. It will serve as an effective tool to reinforce or modify the Action Plan.

The sample Inquiry Activity that follows is designed to build on not only the "The GED and You" activities used in the beginning of the class, but also the more content-specific introductory activities introduced at the beginning of each GED subject area.

GED And You Revisited Inquiry Activity:

"Revisiting And Redoing Your Individual Action Plan"

Objective

This activity is designed to help build awareness of the GED, the content, and how the learner interacts with them.

Mrs. Harriman and Revisiting Our Action Plans

Six weeks ago we each created individual Action Plans for pursuing our project of passing the GED. We have all made great progress and learned many things. It would be valuable now to revisit that plan to see what we've learned, what we can share with one another and what individuals might need to change in their own plans. Does this make sense to you? Does now seem like a good time to do this? Those of you who would like to do this, which I recommend, we can gather over here. For those of you who would like to do this at another time, could you gather over in this space and share with one another how you plan to use today's class time and what you need from me. I will check back with you in 15 minutes.

For those of us writing our plans, here is the Inquiry Activity Guide for Identifying the Problem, Becoming Familiar with the Problem, Planning, Assigning and Performing Tasks, Sharing with Others, and Reflecting, Extending, and Evaluating. Could you together, identify and become familiar with what is being asked, and then break into groups or work individually to plan and conduct the work? Could I also ask you to let me know when and how you would like to share with others? I'll check back with you in about 15 minutes.



GED as Project

Pathways to Passing the GED

1. Identifying The Problem

It has been some time since you have examined your understanding of the GED and taken stock of your progress. In this Inquiry Activity, you will explore changes in your understanding of the GED, the reading and thinking skills needed to pass the GED, and the subject(s) you have studied. You will revise your latest Action Plan if needed.

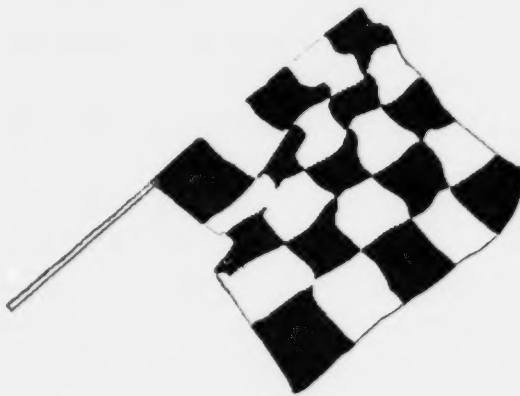
2. Becoming Familiar With the Problem

Don't start answering the questions that follow. As with the first steps on all Inquiry Activities, take time to review the questions to make sure that you understand what they are asking. Discuss with your instructor and/or your classmates your understanding of what you are to do. Think about what you already know and have learned about the subject. Be sure you have your Action Plan.

Now, look over the notes you made for "The GED and You" and the "GED Math and You," or other content areas you are considering. Review your notes and start thinking about what you have experienced and what has changed since that point.

Here are questions for you to consider within this Inquiry Activity:

- 1. Can you describe your understanding of the GED today?*
- 2. How has your understanding of the GED changed? Document the changes. Write down what has changed.*
- 3. What are your new understandings of the reading and thinking skills needed to pass the GED? Document your new understanding. Document what has changed.*
- 4. Can you describe the progress you've made in your test-taking skills? What skills are you developing? List them and describe the progress you have made.*
- 5. Can you describe the progress you have made in your study habits? What habits have you developed? List them and describe the progress you've made.*
- 6. How has your understanding of whatever subject matter you have studied changed? Describe that change. What do you know now that you didn't know before?*
- 7. Can you describe your progress so far on your project of passing the GED?*



3. Planning, Assigning And Performing Tasks Planning and Assigning

Now consider how you are going to approach the task of answering the questions. Plan the way you will proceed. Will you work alone or with a partner? How much time will you give this task? What tools will you use to accomplish the task? How will you know when you've done a good job?

Performing

Doing the Work

Now answer the questions. Support your answers with examples from your experience in working with Inquiry Activities. Consider reviewing the content of your GED Learning Portfolio.

Reaching a Conclusion

Go back to your latest version of the Action Plan and, using the answers to the questions above, revise the Plan.

4. Sharing With Others

Learners should be encouraged to share. Becoming aware of these issues is an important part of the learning process. The sharing should indicate that the learner's understanding has deepened, but in different ways. Someone else's insight might help another learner's understanding. Arrange a time for participants to share with one another and with you. If someone doesn't want to share, that is all right.



As part of the ongoing self-assessment, the learners should share their plan with you, at minimum.

You will share your Action Plan with your instructor so that he/she can help you with it during the course to build upon your strengths and help you through some of your weaknesses. You may also want to share your Action Plan with at least one other class member.

5. Reflecting, Extending And Evaluating

Reflecting: *Think about what you learned.*

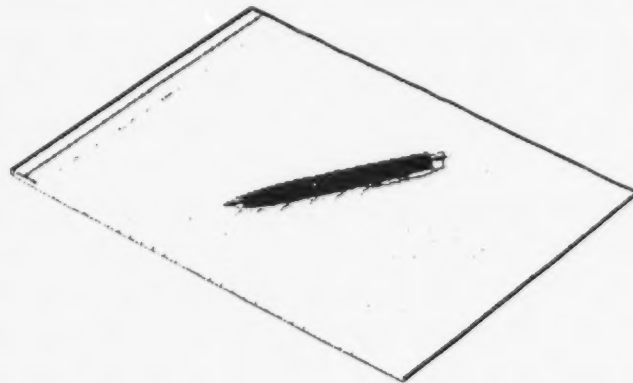
1. What progress have you made?
2. What has surprised you?
3. What has pleased you?

Extending: *Extend what you learned to new situations.*

1. What discoveries have you made about the GED, thinking skills, or the content area you are working in?
2. What questions do you have now about the GED, thinking skills or the content area you are working in?
3. Develop a new set of questions for the individual Action Plan.

Evaluating: *Assess what you learned and how you learned it.*

1. How did this revisiting process work?
2. What was good about it?
3. What could be improved?
4. When should it be done again? Why?



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Student Name

Date

Class

Instructor

Learning Project: GED and You Revisited**Student Inquiry Activity: Revisiting and Redoing Your Individual Action Plan****1. Identifying the problem**

It has been some time since you examined your understanding of the GED and taken stock of your progress. In this Inquiry Activity, you will explore changes in your understanding of the GED, the reading and thinking skills needed to pass the GED, and the subject(s) you have studied. You will revise your latest Action Plan if needed.

2. Becoming Familiar with the Problem (individually)

Don't start answering the questions that follow. As with the first steps on all Inquiry Activities, take time to review the questions to make sure that you understand what they are asking. Discuss with your instructor and/or your classmates your understanding of what you are to do. Think about what you already know and have learned about the subject. Be sure you have your Action Plan.

Now, look over the notes you made for *The GED and You Learning Project* and the *GED Math and You*, or content areas you are considering. Review your notes and start thinking about what you have experienced, and what has changed since that point.

Here are some questions for you to consider within this Inquiry Activity:

1. Can you describe your understanding of the GED today?

2. How has your understanding of the GED changed? Document the new understanding. Write down what has changed.

3. What is your understanding of the reading and thinking skills needed to pass the GED? Document your new understanding. Document what has changed.

4. Can you describe the progress you've made in your test-taking skills? What skills are you developing? List them and describe the progress you have made.

5. Can you describe the progress you have made in your study habits? What habits have you developed? List them and describe the progress you've made.

6. How has your understanding of whatever subject matter you have studied changed? Describe that change. What do you know now that you didn't know before?

7. Can you describe your progress so far on your project of passing the GED?

3. Planning, Assigning and Performing Tasks (individually)

Planning and Assigning: Now consider how you are going to approach the task of answering the questions. Plan the way you will proceed. Will you work alone or with a partner? How much time will you give this task? What tools will you use to accomplish the task? How will you know when you've done a good job?

Performing

Doing the Work: Now answer the questions. Support your answers with examples from your experience in working with Inquiry Activities. Consider reviewing the content of your GED Learning Portfolio.

Reaching a Conclusion: Go back to your latest version of the Action Plan. Using the answers to the questions above, revise the Plan.

4. Sharing with Others

You will share your Action Plan with your instructor so that he/she can help you with it during the course to build upon your strengths and help you through some of your weaknesses. You may also want to share your Action Plan with a least one other class member.

5. Reflecting, Extending and Evaluating

Reflecting: *Think about what you learned.*

1. What progress have you made?
2. What has surprised you?
3. What has pleased you?

Extending: Extend what you learned in new situations.

1. What discoveries have you made about the GED, thinking skills, or the content area you are working in?
2. What questions do you have now about the GED, thinking skills or the content area you are working in?
3. Develop a new set of questions for the individual Action Plan.

Evaluating: Assess what you learned and how you learned it.

1. How did this revisiting process work?
2. What was good about it?
3. What could be improved?
4. When should it be done again? Why?



Resources (Sources last verified March 2002.)

Key: P = Print W = Web V = Video

Material Type	General Information on GED 2002
W	<u>GED Testing Service</u>: www.gedtest.org or same site at American Council on Education: www.acenet.edu/cales/ged/test2002-A.html <i>User-friendly updates, fact sheets, history of GED, test overview, scoring, accommodation for LD, other.</i>
V	<u>GED 2002: Everything You Need to Know</u> and <u>GED 2002: Making the Transition</u>. Obtain on loan through the Virginia Adult Learning Resource Center (1-800-237-0178) or email request to vdesk@vcu.edu <i>Relaxed and very informative programs with key professionals who developed the new test. Good for individual as well as group use.</i>
P	<u>Official Steck-Vaughn GED Practice Tests</u>. To order, call 1-800-782-2512 or visit Web site at www.steck-vaughn.com
P	<u>GED Sampler</u> by Steck Vaughn. To order, call 1-800-782-2512 <i>Small booklet of question samples with explanatory answers and a poster with clear comparisons of the 1988 and 2002 test versions.</i>
Material Type	Assessment
P	<u>Understanding by Design</u>, by Wiggins & McTighe. Merrill Prentice Hall, New Jersey, 1998. <i>Wonderful concept of "Backwards Design" presented to help instructors think like assessors, rather than activity designers. Helps reader learn to assess to be able to check for understanding and what understanding really means.</i>
Material Type	Critical Thinking and Higher Order Thinking Skills
P	<u>Bloom's Taxonomy</u> - Bloom, B.S., et al. <u>Taxonomy of Educational Objectives</u> Handbook I: Cognitive Domain. New York: McKay, 1956. <i>A standard in educational theory.</i>
P,V,W	<u>Central Illinois Adult Education Service Center's "Part I: Phasing Into the New GED 2002: Preparing Students to Think Critically"</u> (#539 or 539A) Order - 1-800-322-3905 or see site www.cait.org/ciaesc/training <u>Manual</u> - Provides overview of GED 2002 test, Bloom's Taxonomy and the Multiple Intelligences. Provides strategies for helping students think critically, teaching tips, and help in developing integrated and thematic unit lessons. <u>Video</u> - Class lesson simulations to demonstrate thematic unit planning and teaching, which ties all GED subjects under one study theme with interactive and participatory methods. <i>Includes a number of interesting statistics about the GED and GED completers.</i> <u>Web site</u> - Provides information, teaching tips and lesson plans on helping students think critically and prepare for the GED 2002. <i>Note: Lessons tend to be complicated and broad, but they can be streamlined to fit needs.</i>



P,W	<u>Learning to Think: Learning to Learn: What the Science of Thinking and Learning Has to Offer Adult Education</u>, by Jennifer Cromley. Published by the National Institute for Literacy under a 1998-1999 Literacy Leader Fellow Project, 2000. Call 1-877-433-7827 to inquire about availability, or click on Jennifer Cromley at www.nifl.gov/nifl/fellowship.html <i>How to teach students about how to think, to teach for understanding and plan appropriately. Helps an instructor understand memory connections and learning for transfer in an adult. Sample lesson plan ideas. Accessible, easy read. Good resource for professional staff development.</i>
P	<u>Teaching for Successful Intelligence: To Increase Student Learning and Achievement</u> by Sternberg & Grigorenko. Illinois: Skylight Professional Development, (2000). <i>Develops the theory of successful intelligence and the triarchic teaching model, providing for students' analytical, creative, and practical thinking tendencies. Sample lesson ideas after every chapter.</i>
W	<u>SCANS 2000</u>: Secretary's Commission on Achieving Necessary Skills, www.scans.jhu.edu <i>Excellent foundational research that describes the hard and soft skills employers have identified that employees need to succeed in the workplace. Developed for general, and then specific job titles. Useful for curriculum development and lesson planning guidance.</i>
Material Type	Learning Disabilities
W	<u>Accommodating Accommodations</u> and <u>How to Apply for Accommodations: the I-15 form</u>. Developed by Kathleen Kidder and the US Department of Education, http://gwis2.circ.gwu.edu/%7Ekkid/gcdhome.htm
P,W	<u>Bridges to Practice</u> materials and training. A project of the National Institute for Literacy, with the National Adult Literacy and Learning Disabilities Center, Washington DC, (1999). To find an excellent Web site on <u>Bridges to Practice</u>, go to the National Institute for Literacy (NIFL) site, at www.nifl.gov and click on the <u>Bridges to Practice</u> icon at the bottom of the cover page. <i>This is a thorough research-based guide for literacy practitioners serving adults with learning disabilities.</i>
V,W	<u>Professional Development Videoconference Videotapes</u> produced through KET-TV, www.ket.org/adulted Or, videos may be available for borrowing through the Virginia Adult Learning Resource Center, 1-800-237-0178. <i>Covers many aspects and issues related to learning disabilities in the adult student population. This site also offers many other professional development options.</i>
Material Type	General Lesson Plan Materials
P,V,W	<u>Central Illinois Adult Education Service Center's "Part 1: Phasing Into the New GED 2002: Preparing Students to Think Critically"</u> (#539 or 539A) Order - 1-800-322-3905 or see site www.cait.org/ciaesc/training <u>Manual</u> - Provides overview of GED 2002 test, Bloom's Taxonomy and the Multiple Intelligences. Provides strategies for helping students think critically, teaching tips, and help in developing integrated and thematic unit lessons. <u>Video</u> - Class lesson simulations to demonstrate thematic unit planning and teaching, which tie all GED subjects under one study theme with interactive and participatory methods. <i>Includes interesting statistics about the GED and GED completers.</i>



	<u>Web site</u> - Provides information, teaching tips and lesson plans on helping students think critically and prepare for the GED 2002. <i>Note: Lessons tend to be complicated and broad, but they can be streamlined to fit needs.</i>
P,W,V	<u>Workplace Essential Skills</u> and <u>GED Connections</u>: by PBS LiteracyLink and KET. See www.ket.org/adulted, www.pbs.org/literacy, or www.pbs.org/literacy/gedtour/interact.html to "take a tour." For training information: call the Virginia Adult Learning Resource Center 800-237-0178. <i>Both of these curriculum packages are interactive and professionally developed. Virginia holds a state license to both, so the videos and workbooks are also affordable. Online internet lessons are free. Both systems require training. Information on this can be obtained through the VALRC (above). Workplace Essential Skills is workplace-oriented and aims at both the general adult education audience as well as the Pre-GED student. GED Connection is for GED study, presented with an emphasis on workplace and "real world" application.</i> <i>Check out their Web sites for good information, learner sites, and access to professional development online. PBS announces on-line lessons for ESL coming in 2003 and online professional development for ESL educators coming in 2002.</i>
W	<u>100 Lesson Plans for GED Content Areas</u>, complete with worksheets and real-life application, www.aceofflorida.org/in-service <i>Includes lesson plans and in-service opportunities online. Lessons may download slowly from this site, but they are thorough and interesting.</i>
P	<u>Complete GED Preparation</u> by Steck-Vaughn (2002). Call 1-800-782-2512 or see www.steck-vaughn.com
P	<u>Steck-Vaughn's "Instructor's Resource Guide."</u> Order through 1-800-782-2512. <i>Large 3-ring binder with all 5 GED topics addressed. Correlates lesson plans to the Steck-Vaughn GED 2002 workbooks. Provides group activities and extension activities to address need for critical thinking and real-life application.</i>
P	<u>2002 GED: The Complete Book.</u> McGraw-Hill/Contemporary, www.mhcontemporary.com/home.html
Material Type	Professional Development Resources
V	<u>GED 2002: Everything You Need to Know</u> and <u>GED 2002: Making the Transition</u>. Obtain on loan through the Virginia Adult Learning Resource Center. Call 1-800-237-0178 or email request to ydesk@vcu.edu <i>Relaxed and very informative programs with key professionals who developed the new test. Good for individual as well as group use.</i>
W	<u>GED 2002 Online Professional Development</u> through KET, www.KET.org/GED2002 <i>Free training on GED tests, Math, Writing and Critical Thinking. More training topics to come. Orientation available on friendly, easy to navigate Web site.</i>
P	<u>The Practical Guide to Facilitation: A Self-Study Resource</u>, by Farrell & Weaver. Human Resource Development Press, San Francisco, 2000. <i>Insightful self-study guide to train the reader to be a better facilitator, borrowing from facilitative models in the workplace. Can work in small group settings or independently.</i>
W,P	The Virginia Adult Learning Resource Center (VALRC) in Richmond, Virginia. Call 1-800-237-0178 or see their site at www.vcu.edu/aclweb/ See the Professional Development Planning Guide for training, and the electronic Card Catalog for resources, or email the center at ydesk@vcu.edu <i>Personalized service and resource center. Materials mostly shipped free to practitioners in Virginia. Professional Development and Training provided, both in person and online. On the Web site, click on "GED Information" for updates and links regarding GED 2002. Also links to NIFL and LINC.</i>



GED as Project

Pathways to Passing the GED

P,W	<u>Learning to Think: Learning to Learn: What the Science of Thinking and Learning Has to Offer Adult Education</u>, by Jennifer Cromley. Published by the National Institute for Literacy under a 1998-1999 Literacy Leader Fellow Project, 2000. Call 1-877-433-7827 to inquire about availability, or click on Jennifer Cromley at www.nifl.gov/nifl/fellowship.html <i>How to teach students about how to think, to teach for understanding and plan appropriately. Helps an instructor understand memory connections and learning for transfer in an adult. Sample lesson plan ideas. Accessible, easy read. Good resource for professional staff development.</i>
Material Type	Student Resources
P	<u>For general information, call 1-800-62MYGED</u> Will also direct student to the nearest testing center. <i>This is the national service center.</i>
P	<u>For the GED Helpline, call 1-877-37MYGED.</u> <i>This is the state-funded service center, based at the Virginia Adult Learning Resource Center. It offers help with GED information and resources, including how to interpret GED scores, study tips, test-taking strategies, information on practice testing.</i>
W	<u>For general information, click on "Prospective GED Test-Takers" at www.gedtest.org</u> <i>Gives GED 2002 overview, an understanding of the test, how it is scored, its history, test sites, and sample GED questions.</i>
W	<u>Practice the GED test on-line</u> - Two options for free services: www.gedpractice.com, offered by Steck-Vaughn or www.pbs.org/literacy, offered by PBS Literacy Links/KET
Material Type	Technology & Internet Links
W	<u>Project Software</u> Web site: Kit Bieschke-Baker at wcs.k12.va.us/programs/psoft <i>Links to a variety of useful sites with a brief summary of their content. Includes software reviews, workshop sites and internet resources for teachers and learners. Easy to navigate. Option to email Kit from the site with specific questions you may have. Kit is also the specialist for virtual learning for PBS Literacy Link's Workplace Essential Skills and GED Connection series.</i>
Material Type	Subject Area Math
P	<u>Knowing and Teaching Elementary Mathematics: Teachers' Understanding of Fundamental Mathematics in China and the United States</u>, by Liping Ma. Lawrence Erlbaum Associates, New Jersey, 1999. <i>Why do Chinese students typically outperform American students in math? Even considering Chinese teachers receive far less formal mathematics education than in the US? Their success traces back to a deeper, integrated, understanding of math that is part of the Chinese culture. This book helps the reader improve his/her teaching approach to basic math by improving how he/she thinks about and understands the subject. Real-life stories and examples.</i>
P	<u>The GED Math Problem Solver: Reasoning Skills for Application</u>, by Myrna Manly. Contemporary Books, Illinois. This book and teacher's manual should be available, revised from the original 1992 version, in the fall of 2002. <i>Terrific resource for understanding the thinking process behind math and teaching math to build number sense and application, rather than as an endless series of rules and computation.</i>



P	<u>Smart Solutions: Comprehensive Math Review</u> from New Readers Press. www.newreaderspress.com <i>Organized in 2-page spreads on most topics to facilitate student research.</i>
P	<u>Focus on Basics</u>: quarterly newsletter published by NCSALL. The September 2000 issue includes several articles on mathematics education for adults, including "Developing Adults Numerate Thinking: Getting Out from Under the Workbook" vol. 4, Issue B, Sep. 2000.
W	See Web site to read articles at http://www.gsc.harvard.edu/~ncsall/fob/ Subscribe online or call the Virginia Adult Learning Resource Center for more information at 1-800-237-0178. <i>An excellent quarterly newsletter - each publication themed to a specific instruction-oriented topic. Subscription is inexpensive and articles can be read free online.</i>

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Appendix 1

Seven Simple Strategies for Improving Group Instruction in Adult Education Settings

1. The layout of the room is critically important to successful group instruction. Avoid seating learners in rows; have them sit so that they can see one another's faces.
2. If the learners in the group don't know one another's names, have them display name tents during the session. Designing colorful, personalized name tents is a fun way to get a session going, and the tents dramatically increase the likelihood of learner-to-learner conversation.
3. Sit at the same level and in the same kinds of seats as your learners. Try sitting somewhere other than in front of the room. All of these things reduce your symbolic authority and empower learners to express themselves.
4. In guiding group discussion, your ultimate goal is to get learners talking among themselves. Try to get learners to react to one another's ideas by asking questions such as "Has any one else had a similar experience?" and "Does anyone want to react to that?"
5. Try not to talk too much. Think of yourself as the conductor of an orchestra whose job it is to get *all* of the instruments playing in an orderly fashion.
6. Make sure everyone is taking part in the conversation. If someone is silent, gently ask, "What do you think about that?" Some people will have wonderful things to say if you create a space for them, but will remain silent if they have to fight their way into a lively discussion.
7. If one or two people are dominating the group, try to control them by saying, "Okay, let's hear from someone who hasn't spoken yet," or by "going around the room" to have each person respond to the topic under discussion.

Tom Valentine, November 1996

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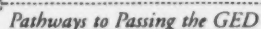


Appendix 2

Sample Individual Action Plans

▲ LEARNER'S NAME _____	▲ DATE _____
▲ CLASS _____	▲ INSTRUCTOR _____
What is your reason for wanting the GED? _____ _____ _____ _____	
1. How would you rank your test-taking skills for the GED test? (low) 1 2 3 4 5 (high) Date: _____ Comments: _____ _____	
(low) 1 2 3 4 5 (high) Date: _____ Comments: _____ _____	
2. How would you rank your reading skills in the context of the GED? (low) 1 2 3 4 5 (high) Date: _____ Comments: _____ _____	
(low) 1 2 3 4 5 (high) Date: _____ Comments: _____ _____	

(continued)



Sample Individual Action Plans *(continued)*

▲ DATE _____

▲ INSTRUCTOR

- Based on how I ranked myself for reading (on page 1 on this form), what will I do to improve my reading for the GED, if necessary?
- How do I plan to improve my test-taking skills for the GED?
- How often will I attend class and study for the GED? (Include here any problems you may have attending class or studying and how you plan to deal with the problems.)

Date: _____

▲ INSTRUCTOR'S SIGNATURE



Appendix 2

Sample Individual Action Plans *(continued)*

▲ LEARNER'S NAME _____

▲ DATE _____

▲ CLASS _____

▲ INSTRUCTOR _____

My MATH Action Plan. *(A similar form will be presented for the other GED subjects).* Go to page 1 and rank yourself at this time (include the date) on your reading and test-taking skills. Then read over the following questions and respond to them in your Math Action Plan.

- a) What math subjects am I most familiar with?
- b) What do I want to know about math?
- c) How can I use my reading skills to help with math word problems?
- d) How can I use my thinking skills to help with math word problems?
- e) How can I use test-taking skills in the math portion of the GED?
- f) What parts of my GED & You Action Plan can I use in this Math Action Plan?

My MATH Action Plan

Date: _____

▲ LEARNER'S SIGNATURE _____

▲ INSTRUCTOR'S SIGNATURE _____



Appendix 2

Sample Individual Action Plans *(continued)*

▲ LEARNER'S NAME

▲ DATE

▲ CLASS

▲ INSTRUCTOR

(This Action Plan revisited is to be used in the middle of a content area. You will already have given the GED & You Action Plan and a content Action Plan, like math, but you have not finished the content area.)

My Action Plan Revisited.

- a) Review my GED & You Action Plan and the Content Action Plan.
- b) What more have I learned about reading for the GED since my last Action Plan and what I will do to improve my reading still further if necessary?
- c) How has my GED & You Action Plan worked with regard to studying for the GED? What changes do I want to make?
- d) How has my original plan to attend class and study for the GED worked? Include here what changes I want to make to this part of my plan and why.

My Action Plan, Revisited

Date: _____

▲ LEARNER'S SIGNATURE

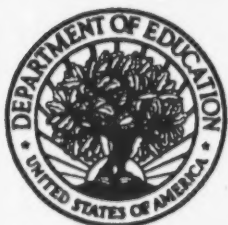
▲ INSTRUCTOR'S SIGNATURE



References for GED as Project Guidebook

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